The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 619.—Vol. XVII. LONDON, SATURDAY, JULY 3, 1847. [Price 6d.

FLINTSHIRE.

SALE OF most important and highly valuable FREEHOLD PROPERTY, consisting of all those extensive and newly-erected premises, the

GREENFIELD ZINC WORKS,

occupying an area of upwards of four statute acres, together with all the railways, wharfs, and lands adjoining and surrounding the same, comprehending, in the whole, nearly 30 statute acres of land, through the centre of which the line of the great Chester and Holyhead Railway passes, besides having a spacious quay, or wharf, and a considerable frontage to the River Dee—thus possessing within itself the paramount advantages of water and railway communication; and immediately after the above,

A SALE WILL BE HELD

of the whole of the MACHINERY and UTENSILS belonging to the premises, and others removed from the Mostyn and Abbey Collieries, comprising a beautifully finished 300-horse power BRIGHT STEAM-ENGINE, which has scarcely been used; two smaller BLACK ENGINES (one fixed on the premises, with force pumps, double rollers, and lathe attached, and the other just removed from the Abbey Colliery), large quantity of cast-iron pumps, from 2½ to 15 inches bore, with clackdoor, bucket, and matching-pieces, foundry and blacksmiths' fans, bellows, anvils, vices, screwplates, taps and dies, moulds, tools of all descriptions, and other requisites; trucks, wheelbarrows, near 50 iron and wood coal waggons, with iron wheels, large quantities of Stourbridge and Buckley fire-bricks, three large weighing machines, and several small patent scales, valuable turret clock, small tell-tale clock, new and old bar and angle iron, fire bars, pulleys, nuts, screws, bolts, washers, rivets, scrap and sheet-iron, large ladles and cauldrons, very large size gas-metre, piping and burners, and other miscellaneous effects, which will be submitted to PUBLIC AUCTION, by Messrs. CHURTON, on Thursday and Friday, July 8th and 9th, at Twelve o'clock each day, upon the premises, at Greenfield, one mile from Holywell, four from Flint, and 14 from Chester and Rhyddlan. 1

Catalogues may now be had at the auctioneers' offices, Whitchurch, Chester, or 41, Lord-street, Liverpool.

The vendors are willing to treat for the Sale of the Works by Private Contract.

FOREST OF DEAN, GLOUCESTERSHIRE.

BLAST-FURNACE AND COLLIERIES.—TO BE SOLD, BY AUCTION, by Mr. WHITE, at the Bell Inn, in the city of Gloucester, on Tuesday, the 13th day of July, 1847, at Three o'clock in the afternoon punctually, in one lot, the newly-erected and valuable BLAST-FURNACE, for the smelting of iron, called

DARK-HILL FURNACE, 2

with the ENGINES, MACHINERY, apparatus, hot-blast stoves, casting-house, carpenters' and blacksmiths' shops, and other buildings, coke-yard, furnace-yard, water ponds, reservoirs, lands and appurtenances thereto belonging and adjoining, the site whereof comprises, in the whole, 5A. 3R. 17P., or thereabouts, situate within a few yards of the Severn and Wye Railway, and of the turnpike-road leading from Coleford to Park End and Blakeney, in the township of West Dean, in the Forest of Dean. Also, the two very desirable COAL MINES, GALES, or LEVELS, of COAL, called

DARK HILL AND SHUTCASTLE COLLIERIES, adjoining each other, situate in the said township of West Dean, with the buildings, coke-yards, tram-plates, and other matters and things used in working the same collieries, and now being in, upon, or under the same. The collieries comprise the coal under about 100 acres of land, and are estimated to contain 6000 tons per acre of the Coleford High Delf Coal in a vein of 6 feet thickness. The mouth of the Dark-hill level lies within 50 yards of the Severn and Wye Railway, and within about 300 yards of the furnace.

The blast-furnace is capable of making from 50 to 70 tons per week of pig-iron, which can be manufactured and delivered at the shipping port of Lydney, at a cost, including every expense, not exceeding 55s. per ton.

The DARK-HILL COLLIERY is subject to a yearly rent or royalty of three half-pence for every ton of coal brought out, payable to the crown half-yearly; and if such rent shall not amount within any year to £3, then a rent of £3 in lieu thereof.

The SHUTCASTLE COLLIERY is subject to a yearly rent or royalty of one penny for every ton of coal brought out, also payable to the crown half-yearly; and if such rent shall not amount within any year to £2, then a rent of £2 in lieu thereof.

Two undivided third parts or shares in the blast-furnace, and lands, and collieries are freehold of inheritance. The other one undivided third part is held by lease for the remainder of a term of 21 years (except the last three days of the said term), commencing on the 1st day of January, 1846, and is subject to the payment, to the proprietor of such one-third part, of 3s. 4d. for every ton of pig-iron made upon the premises, and three-pence for every ton of saleable coal raised or gotten out of the premises, other than and except the coal fairly raised for household purposes by workmen employed in the said mines and works, and other than and except any coal consumed in the making or manufacturing iron upon the said premises; but if the said rent of 3s. 4d. per ton of pig-iron shall not amount in any half-year to £100, then the sum of £100 is to be paid in lieu thereof for such half-year.

An abundant supply of excellent IRON MINE can be obtained at a price ranging from 3s. to 7s. per ton, delivered at the furnace-yard; and fire-bricks are made in a brick-yard adjoining the property.

Further particulars and information respecting the property, may be obtained of R. Mushet, Esq., Coleford, Gloucestershire; or of Messrs. Fowles, Tyler, and Fowles, solicitors, Monmouth.

TO CAPITALISTS.—VALUABLE SLATE QUARRY, near the SOUTH COAST of ENGLAND.—TO BE DISPOSED OF, BY PRIVATE CONTRACT, the UNEXPIRED TERM, with all the STOCK, MACHINERY, &c., of a truly valuable SLATE QUARRY, possessing advantages superior to most quarries in the United Kingdom. This very desirable property is situated only about three-quarters of a mile from a shipping place, where vessels of 150 or 200 tons can approach, and to which place the slate can be brought from the quarry, at the small cost of 10d. per ton, and from which place barges can be procured at 7d. per ton, if required, to convey the same to one of the most secure harbours in the English Channel, where vessels of 500 to 700 tons can at all times receive their cargoes afloat. 3

The quarry produces slabs of the largest sizes, and are brought out so true, as to require little labour to give them a fair surface, whilst they are also easily converted into the required covering slates of all descriptions; the quality of which, for durability and colour, is unquestionable, as may be ascertained in the vicinity, where public buildings have been covered with this slate from 100 to 200 years, and which is now perfect. Affidavits can also be obtained from the oldest tradesmen, if required, in proof of its justly-merited reputation.

There are at present on the floors (which are very extensive, and through which level railroads pass) a stock of slate, of all descriptions, in slabs, flooring, and sizes, which, with the removeable machinery, is valued at £4000.

This very important quarry is worked by Sims's Patent Combined Cylinder Steam-Engine (and which quarry should be stated to have a fall of 150 to 200 feet for all wastes), the lease of which, together with the establishment, machinery, and stock of slate, is now offered for £5000.

The most satisfactory reasons can be given for its disposal by the present proprietor, and all further particulars known, on application at the offices of Mr. W. H. Smith, 10, Warnford-court, Throgmorton-street, London; and Mr. G. Trickett, jun., Union-road, Plymouth, where samples of the slate may be seen.

TO BE SOLD—ONE HIGH-PRESSURE STEAM-ENGINE, of 40-horse power, calculated at 20 lbs. pressure to the inch. This engine is quite new, and very strongly built, having been intended for driving heavy machinery, and is not now required.—For particulars apply to Mr. Matthew Smith, No. 26, Button-lane, Sheffield. 4

STEAM-ENGINES AND OTHER MINE MATERIALS FOR SALE.—TO BE SOLD, BY PRIVATE CONTRACT, at TRETOIL MINE, near BODMIN, Cornwall, the undermentioned

MINE MATERIALS—VIZ.:

1 66-inch cylinder STEAM PUMPING-ENGINE, with two boilers, about 20 tons, complete
1 Other boiler, about 12 tons
1 21-inch cylinder STEAM PUMPING-ENGINE, without boiler
44 17-inch pumps, 9 feet long
2 17-inch plunger poles, to go 7 feet stroke
2 18-inch cases for ditto
3 Stuffing-boxes for ditto
3 Windbores, ditto
2 H-pieces and doors 2 Door-pieces, ditto
5 12-inch pumps, 9 feet long
1 11½-inch door-piece
6 11½-inch pumps, 9 feet long
1 10½-inch working barrel 1 10-inch ditto ditto
1 11½-inch windbore 4 9-inch pumps, 9 feet long
1 6-inch windbore
1 13-inch plunger-pole, 9 feet long, stocked complete
1 13-inch case, with stuffing-box attached, complete
1 6-inch plunger-pole, 8 feet long, stocked 1 6-inch ditto ditto
1 6-inch H-piece and door of ditto, door-piece, &c.
1 6-inch case and stuffing-box, complete 1 6-inch ditto windbore
1 grinder, and 16-feet water-wheel, complete, with stamps and frames
A large balance-bob, with queen post, gudgeon, plever blocks, strapping plates, holding-down bolts, &c.
Other smaller balance-bobs
A large capstan, with oak axle Other smaller capstans
A shears, 50-feet high Another smaller shears
130 Fathoms 13-inch capstan rope, nearly new
130 Fathoms 12-inch capstan rope
Whims Whim ropes
16 Strapping plates of hammered iron, for main-rods
19 ditto doubled rolled, for ditto
Main rods, staples and glands, rod bolts
Strapping plates Flat-rod pulleys
Railroad iron, tram waggons, air pipes, ladders
Much useful mine timber, old pumps, and various other things

The pitwork, and much of the other materials are nearly new, and in good condition.

Apply to Mr. Henry Thomas, 8, George-yard, Lombard-street, London; Mr. George Gedes Bodmin; or to Capt. Henry Williams, at the mine.—Dated June 8, 1847. 5

MINING ADVENTURERS' SUBSCRIPTION ROOM, ORIGINAL REGISTRY OFFICE FOR THE SALE AND PURCHASE OF MINING SHARES.

CROSSMAN, SOMMERS, AND CO., AGENTS,
28, *THREADNEEDLE-STREET LONDON.*

SHARES FOR DISPOSAL.

Great Wheal Frederick Tin Mine	Wheal Mary and Elizabeth
Devon and Courtenay Consols	Coombe Mine
North Eastern Mining Co. of Ireland	Wheal Rose 6
South Wheal Maria	Pennant Mining Company
Wheal Susan	New East Crowndale
Holmbush	East Wheal Rough Tor
Wheal Rose Consols	Grambler and St. Aubyn
Redford United Mines	North Wheal Robert
Alfred Consols	Great Wheal Rough Tor

TO ENGINEERS, MILLWRIGHTS, AND MACHINISTS IN GENERAL.—TO BE SOLD, BY PRIVATE TENDER, SUNDRY WROUGHT and CAST IRON DUPLICATE MACHINERY, manufactured by Messrs. Maudslay, Sons, and Field.—May be viewed at the Platform Wharf Warehouse, Rotherhithe, on and after Monday, the 5th July, between the hours of Nine and Twelve and One and Four. 7

TO BE LET, A SMALL COLLIERY, situate at Ossett-street side, near WAKEFIELD, now working by Mr. George Burrell.—For further particulars apply to Mr. J. O. Greaves, Garden-street, Wakefield. 8

TO COAL PROPRIETORS AND OTHERS.—TO BE SOLD, BY PRIVATE CONTRACT, ONE 28-inch cylinder HIGH-PRESSURE STEAM-ENGINE, strong beam, &c., 5-feet stroke, hand gear, made by Sherratts, without boiler.
ONE 16-horse DISC ENGINE.
THIRTY 9-inch PUMP TREES, each 9 feet long.
ONE 14-inch PLUNGER POLE, 9 feet long, stocked complete.
ONE PLUNGER CASE, for ditto, with stuffing-box, H-piece, windbore, and doors, complete.
TWO THOUSAND 4-feet CAST-IRON EDGE RAILS, weighing about 44 lbs. each, with cast-iron chairs for ditto, suitable for colliery purposes.
Also, a BLOWING CYLINDER, for blast-furnace, 76 inches diameter, 7 feet stroke, with side pipes, valves, piston and rod, mounting, parallel motion, &c.
For further particulars apply to the Dukinfield Coal Company, Dukinfield, Cheshire. 9

TO CAPITALISTS—THE ELY VALLEY.—TO BE LET, BY TENDER, all those SEAMS of highly-bituminous COAL, lying under several hundred acres, in the above valley, and containing, in the aggregate, more or less, 35 feet of workable coal—the greater part of which is available by water-power, the property being bounded by the River Ely and its tributaries. Also, will BE LET, the LEAD MINE on the above property, which, when worked, 60 years ago, produced ore of the richest quality—specimens of which, as also of the coal, may be seen, and particulars obtained, by application to the Rev. James Cozens, whose primary object being the opening of the valley, he would be satisfied with a fair sleeping rent and a moderate royalty. 10
The South Wales Railway is now in progress within three miles of the property, and a branch, to join that line, might be made at a comparatively trifling outlay. The distance from the nearest point of junction to the port of Cardiff would be about nine miles.
Ynis-y-Plwm, near Cardiff, June 28, 1847.

TO BE SOLD, an excellent double-power BLAST-ENGINE, on Boullon and Watt's principle (38-horse power), fully capable to blow a furnace, and spare blast for a refinery or cupolas. It is in perfect repair, and only to be disposed of in consequence of a larger being required for additional blast. 11
Applications to be made to Mr. Thomas Rollinson, or Mr. Mark Rollinson, engineers, both of Brierley-hill, Staffordshire.

TO BE SOLD, BY PRIVATE CONTRACT, at GODOLPHIN MINES, ONE 36-inch PUMPING-ENGINE, 6 feet stroke, equal beam, boiler, 8 tons, balance-bob, and first pieces of rod.
ONE 24-inch STAMPING-ENGINE, 8 feet stroke, boiler, 11 tons.
ONE 24-inch WHIM-ENGINE, 6 feet stroke, boiler, 4 tons, and cage.
ONE 18-inch WHIM-ENGINE, 4 feet stroke, boiler, 7 tons, and cage. 12
SIX TUBULAR BOILERS, 11 tons each.
A large IRON BALANCE-BOB, 12 tons.
Application to be made to Capt. R. Williams, on the mines.
Dated Godolphin Mines, Helston, Cornwall, May 27, 1847.

STEAM-ENGINES FOR SALE.—TWO CONDENSING ENGINES (match), by Murray and Fenton, Leeds—cylinders 33-inch diameter, stroke 6-feet, with three boilers, and connections thereto. Also, TWO FORCE PUMPS, 16-inch diameter, with a 5-feet stroke each, and ONE FORCE PUMP, 14-inch diameter, with a 4-feet stroke. The whole in capital working order, and admirably suited for mining or mill-work.—Apply to the engineer of the Phœnix Gas Company, west side of the Bridge-road, at Vauxhall, London. 13

WANTED TO PURCHASE, A SECOND-HAND HIGH PRESSURE PUMPING STEAM-ENGINE, cylinder 28-inch diameter.—Apply to Wilson and Co., 100, St. Vincent-street, Glasgow. 14

WANTS A SITUATION, as MERCHANT'S CLERK, or COMMERCIAL TRAVELLER.—The advertiser (who has been employed as the principal clerk in a merchant's establishment in Cornwall), is desirous of procuring a similar situation, *or of engaging in any capacity where his services would be adequately appreciated and equitably remunerated.* In addition to office business in general, he has a perfect knowledge of mine accounts.—Satisfactory references, for integrity and respectability, can be produced. Age of applicant 36 years.—Address (pre-paid) to "H. L." Post-office, Truro. 15

TO IRONMASTERS.—A YOUNG MAN, who has had considerable practice in book-keeping, is desirous of an ENGAGEMENT as CLERK in an IRON-WORKS. He is respectably connected, and can give satisfactory references.—Address "J. W. D.," Post-office, Clifton, Bristol. 16

ADCOCK'S PATENT SPRAY PUMP.—This important INVENTION having been PERFECTED, and brought into SUCCESSFUL PRACTICAL OPERATION at LLANHIDDEL, at pits belonging to R. J. Blewitt, Esq., M.P., Llantarnam Abbey, near Newport, Monmouthshire, the PATENTEE is ready to RECEIVE, and to execute, ORDERS.—Apply to Henry Adcock, C.E., at his offices, 137, Strand, London, where pamphlets, descriptive of the invention, may be had; at the office of the *Mining Journal*, 26, Fleet-street; and through any respectable bookseller—price 2s. 6d. 17

VENTILATION OF COAL MINES.

BIRAM'S ANEMOMETER, FOR ASCERTAINING THE VENTILATION OF COAL MINES.—This INSTRUMENT is now EMPLOYED by many EMINENT ENGINEERS, to whom reference can be given. 18
For particulars apply to the patentee, B. Biram, Esq., Wentworth, near Rotherham; or to the maker, John Davis, Derby, manufacturer of Miner's Dials, Pit Barometers, and Safety Lamps.

TO MINE AGENTS, MINE SURVEYORS, &c.— W. WILTON,
MATHEMATICAL, PHILOSOPHICAL, AND OPTICAL INSTRUMENT MAKER,
ST. DAY, CORNWALL,
Begs to call the attention of MINE AGENTS and SURVEYORS to his MINER'S THEODOLITE, and other IMPROVED INSTRUMENTS, adapted to MINE SURVEYING; and to assure them, that, from many years' constant application of his energies in one of the most active mining districts to this particular branch of mathematical instrument making, he flatters himself he is able to furnish instruments, equal in point of accuracy and workmanship, and superior as regards adaptation to the wants of the miner, to those supplied by almost any other house. 19
*** A descriptive price list sent free per post, on application.

UNITED MEXICAN MINING ASSOCIATION.—Notice is hereby given, that the HALF-YEARLY GENERAL MEETING of proprietors of this association will be HELD at the office of the company, 5, Finsbury-circus, on Wednesday, the 28th of July inst., at One o'clock precisely, when the election of two directors and one auditor will take place. Directors going out by rotation, Robert Biddulph and Thomas M. Flockton, Esqs.; auditor going out by rotation, Henry Bunster, Esq.—but, being eligible, are candidates for re-election. 20
The transfer books will be closed on the evening of the 12th, and re-opened on the 29th inst. By order of a court of directors, JOHN MATHER, Sec.
5, Finsbury-circus, London, July 1, 1847.

DISSOLUTION OF PARTNERSHIP IN THE COPPER AND ZINC SMELTING BUSINESS.—Notice is hereby given, that the PARTNERSHIP heretofore subsisting between WILLIAM SNEYD, CLEMENT SNEYD, JOHN SNEYD, JAMES KEYS, and THOMAS SNEYD KYNNERSLEY, as COPPER and ZINC SMELTERS, at WEISTON, in the parish of Kingsley, in the county of STAFFORD, is DISSOLVED, and that the same BUSINESSES will henceforth be CARRIED ON by the said JAMES KEYS and his SON, John Keys, under the style, or firm, of 21
June 29, 1847. "JAMES KEYS & SON."

ASSAYING AND ANALYSIS.—Mr. MITCHELL begs to inform the MANAGERS, &c., of MINES, SMELTING-WORKS, and MANUFACTORIES, that he still continues to CONDUCT ASSAYS and ANALYSES of all PRODUCTS, metallurgical and manufacturing, at his LABORATORY,
23, *HAWLEY-ROAD, KENTISH TOWN, LONDON,* 22
to which address communications are to be forwarded.—Instruction in all branches of assaying and analysis as usual.

PIG-IRON.—JAMES BANKS AND CO. have always FOR SALE SCOTCH PIG-IRON, deliverable, free on board, at the Broomielaw, Port-Dundas, Ardrossan, and in the Frith of Forth, at Charleston.
Glasgow, 8, Renfield-street. 23

WILSON & FRASER, 2, WELLINGTON-BUILDINGS, LIVERPOOL, and 13, EXCHANGE-PLACE, GLASGOW, have always ON SALE PIG-IRON, BAR-IRON, RAILWAY CHAIRS, and RAILWAY BARS. 24

MR. R. TREDINNICK, MINING AGENT AND DEALER IN EVERY DESCRIPTION OF SHARES.
THREE KINGS' COURT, LOMBARD-STREET, LONDON. 25

THOMAS P. THOMAS, MINE AGENT, AND DEALER IN RAILWAY AND OTHER SHARES.
18, *THREADNEEDLE-STREET, LONDON.*
BUYER in Wheal Trelawny and Wheal Mary Ann, at fair market prices. 26

MINING OFFICES, 1, ST. MICHAEL'S-ALLEY, CORNHILL, LONDON.

WATSON AND CUELL, MINE AGENTS.— N.B.—STATISTICAL INFORMATION furnished (on application) to SHAREHOLDERS in MINES in Cornwall, Devon, Scotland, Ireland, Wales, and Spain. 27

WILLIAM H. SMITH, MINING SHARE AGENT, 10, *WARNFORD-COURT, THROGMORTON-STREET, LONDON.* 28

JONATHAN DAVEY, MINE AGENT, SURVEYOR, AND SHAREBROKER,
MATTHEW-STREET, TAVISTOCK. 29
Mines surveyed, inspected, and reported on, at the shortest notice; plans, sections, and dialling performed, by day or contract.

MESSRS. WINSTANLY AND CO., SHAREBROKERS, inform their friends and the public, they BUY and SELL every description of RAILWAY SHARES on the most advantageous terms; they also make advances upon the deposit of scrip and shares for periods as may be agreed. 30
6, Bank Chambers, City.

JAMES LANE, MINING SHARE DEALER, 75, *OLD BROAD-STREET, LONDON.* 31

JOHN TREGONING, MINE SHARES COMMISSION AGENT, *HIGH-CROSS, TRURO.* 32

ASTURIAN MINING COMPANY.—The board of directors hereby give Notice, that they have made a further CALL of ONE POUND per share upon the shares held in the capital stock of the company, and that such call is PAYABLE at the London and County Banking Company, Lombard-street, on or before the 4th day of August next. By order of the board, 33
9, Austinfriars, July 2, 1847. K. MACKENZIE, Secretary.

BLAENAVON IRON AND COAL COMPANY.—Notice is hereby given, that, in pursuance of a resolution passed this day by the board of directors, a DIVIDEND of TWENTY SHILLINGS per share upon the old shares of this company will be PAID on and after the 1st day of August next, between the hours of Eleven and Three o'clock. By order of the board, 34
Offices, 4, Pancras-lane, July 2, 1847. JAMES BOOTH, Secretary.
N.B.—The transfer books will be closed from the 10th July to the 1st August.

BRITISH MINING OFFICES, 41, MOORGATE-STREET, LONDON.—PROSPECTUSES may be had, and ORIGINAL SHARES ALLOTTED in the COPPER and SILVER-LEAD MINES connected with these offices, on application to the secretary, THOS. HENRY TAUNTON. 35

CURRENCY CREEK SPECIAL SURVEY.—The PRO- PRIETORS of LAND GRANTS in this SURVEY are requested to MEET at the London Tavern, Bishopsgate-street, on Monday, the 5th July, at Three o'clock precisely, to receive the report of the committee appointed at the general meeting, 31st May last.
19, South-street, Finsbury, June 24, 1847. HANANEL DE CASTRO, Chairman. 36

CALLINGTON MINES COMPANY.—A DIVIDEND (being the fifth) of ONE POUND per share will be PAYABLE here on Wednesday, the 23d inst., and following Wednesdays, between the hours of Twelve and Three o'clock.
44, Finsbury-square, June 9, 1847. 37

CALLINGTON MINES COMPANY.—RESOLUTIONS passed at the General Meeting of shareholders, held on the 23d June, 1847.
Resolved,—That the reports and accounts, now read, be received, adopted, and entered in the cost and transfer book.—Carried unanimously.
Resolved,—That the thanks of the shareholders be presented by this meeting to the chairman and directors, for their judicious, careful, and able management of the company's affairs.—Carried unanimously. RICHARD HODGSON, Chairman. 38

LEWIS MINES COMPANY.—RESOLUTIONS passed at the General Meeting of shareholders, held on the 22d June, 1847. 39
Resolved,—That the reports and accounts, now read, be received, adopted, and entered in the cost and transfer book.—Carried unanimously.
Resolved,—That the thanks of the shareholders be presented by this meeting to the chairman and directors, for their judicious, careful, and able management of the company's affairs.—Carried unanimously. RICHARD HODGSON, Chairman.

NATIONAL BRAZILIAN MINING ASSOCIATION.— The directors hereby OFFER FOR SALE, NINE HUNDRED marked SHARES of this association, with the four calls of £1 per share, due—

1847—18th February, 18th May, 18th August, 18th November, } Total, £4 per share, receipted on the same. 40

The biddings to be made in sealed tenders for parcels of not less than 150 shares each, enclosing a cheque for the amount; the tenders to be sent to this office, directed to John Kempston, Esq., secretary pro tem., on or before Twelve o'clock on Wednesday, July 7, 1847. JOHN KEMPSTON, Jun., Secretary pro tem.
26, Throgmorton-street, June 30, 1847.

OFFICE OF THE GOVERNOR AND COMPANY OF COPPER MINERS IN ENGLAND, Castle Baynard Wharf, Upper Thames-street, London, July 1, 1847.—HOLDERS of DEBENTURES of this corporation, falling due on the 15th of this month, who may be desirous of RENEWING the same, are hereby requested to signify their wishes by letter, addressed to the Court of Assistants, on or before the 10th inst. By order, E. YOUNGER, Sec. pro tem. 41

ROYAL SANTIAGO MINING COMPANY.—The directors hereby give Notice, that the ANNUAL GENERAL MEETING of the shareholders will be HELD at the office of the company on Wednesday, the 14th of July next, at One o'clock precisely, when the directors will make their report.
36, Broad-street-buildings, June 26, 1847. 42

ST. JOHN DEL REY MINING COMPANY.—Notice is hereby given, that the TENTH HALF-YEARLY DIVIDEND, being TEN SHILLINGS per share on the shares in this company, will be PAID at this office on Saturday, the 10th July, and on any succeeding day, between the hours of Ten and Four.
Forms for claiming the dividend may be obtained at the company's offices, and must be left three clear days for examination previous to payment.
For the Secretary, W. HOUTH. 43
8, Tokenhouse-yard, Lothbury, June 28, 1847.

TAMAR SILVER-LEAD MINING COMPANY— SMELTING DEPARTMENT.
Notice is hereby given, that the INTEREST, at 5 per cent., to the 30th inst., on the DEBENTURES of this company, will be PAID on Wednesday, the 14th proximo, and following Wednesdays between the hours of Twelve and Four o'clock. 44
44, Finsbury-square, London, June 24, 1847.

TRELEIGH CONSOLIDATED MINING COMPANY.— The directors hereby give Notice, that a MEETING of the shareholders will be HELD at the office on Monday, the 5th of July next, at One o'clock precisely, when the accounts for three months, ending the 30th of June, will be laid before them. 45
37, Old Broad-street, June 14, 1847. WM. NICHOLSON, Secretary.

WHEAL CONCORD.—Notice is hereby given, that a SPECIAL GENERAL MEETING of the shareholders and adventurers in this mine will be HELD at the Account-house on the mine, situate in the parish of South Sydenham, in the county of Devon, on Monday, the 5th day of July next, at Twelve o'clock at noon, for the purpose of taking into consideration the propriety of selling the present adventurers' interest in the mine and materials—for adopting some measures for discharging their present liabilities—and on general and important business. 46
Callington, June 24, 1847. G. W. SNELL, Purser.

Just published, Part I.,

COMBUSTION of COAL, CHEMICALLY & PRACTICALLY CONSIDERED. With coloured plates.
By CHARLES WYE WILLIAMS, Esq.
London: Simpkin, Marshall, & Co., and J. Weale—*Birmingham:* Wrightson & Webb. 47

Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

MONDAY.....Treleigh Consols Mining Company—office, at One.
Wheal Concord Mining Company—at the mine, at Twelve.
European Life Assurance Company—offices, at One.
Sambre and Meuse Railway—London Tavern, at One.
Reversionary Interest Company—offices, half-past Eleven.
TUESDAY.....Colonial Bank—London Tavern, at Twelve for One.
Catholic, Law, and General Life Assurance Co.—office, Twelve for One.
WEDNESDAY...Anglo-Mexican Mining Association—offices, at One.
East and West India Dock Company—offices, at Two.
THURSDAY.....Mining Company of Scotland—offices, at Twelve.
City of Toronto and Lake Huron Railway—offices, at Twelve.
London and Blackwall Railway—London Tavern, at Twelve.
Metropolitan Joint-Stock Conveyance Company—Pine Apple Tavern, Hungerford Market, at half-past Six.
FRIDAY.....Imperial Fire Insurance Company—offices, at One.
SATURDAY....Rugby, Derby, and Manchester Railway—London Tavern, at One.

[*The meetings of Mining Companies are inserted among the Mining Intelligence.*"

SOUTH AUSTRALIAN BANKING COMPANY.

The sixth annual general meeting of the South Australian Banking Company was held at the offices, 54, Old Broad-street, City, on Tuesday, June 29.

EDWARD DIVETT, Esq., M.P., in the chair.

The minutes of the last annual meeting having been confirmed,

Mr. WHEELER (the manager) read the following report:—

The directors of the South Australian Banking Company beg to submit to the sixth annual general meeting of proprietors, the following report of the company's affairs:—

Since the last annual meeting the commerce of South Australia has been greatly increased by the extended working of the various mines (chiefly of copper ore), found in the colony; and by the numerous additions to the population, through large arrivals of labourers, with a fair proportion of capitalists, further progress in developing the resources of the colony is almost certain. The excitement consequent upon successful mining enterprises has naturally existed in South Australia, and influenced the operations of many of its settlers; but the directors cheerfully testify to the caution of the local board and manager, who appear to have conducted the bank most skilfully, and to have fulfilled the instructions of the London directors, that every facility should be rendered to the legitimate trade of the province, but that none of the capital should be knowingly risked in hazardous schemes. During the last year a considerable and profitable business has been transacted by the bank, the results of which the board now communicate.

At the annual balance on 30th November last, the local management again scrutinised every asset, and with few exceptions considered all to be good for the amounts appearing respectively in the books. The few bad and doubtful debts were transferred to profit and loss (as ordered by the London board), that your balance-sheet might be unobjectionable; and the manager, Mr. E. Stephens, reports as follows—viz: "Having most rigidly examined into every asset of the bank, we at once passed to profit and loss account every item of a positively doubtful nature, that the instructions on this head should be fully complied with, and that the directors should be cognisant of the state of the affairs of the bank. We have satisfied ourselves, by the most careful and rigid scrutiny, that the amount of net profits is *bond fide* correct." Some few debts have also been made to profit and loss, from matters arising on adjusting more of the old affairs; and numerous small sums have, through Mr. Stephenson's vigilance, been recovered upon debts previously written off as hopeless. The net profits of the year's business at Adelaide, after every reduction for expenses of the establishment, unusual charges (from having to import extra supplies of specie, notes, stationary, &c.), loss on old affairs, &c., show an increase upon last year. The South Australian Company having paid off much of their debt, the receipts in London, for interest, &c., have necessarily been reduced. The summary of the general profit and loss account is as follows—viz:

Amount of undivided profits on 25th May, 1846.....				£10,584 14 5
Less appropriated to preliminary expenses, and to reserve fund	3150	0	0	—£7434 14 5
Balance of former Adelaide profits not then included.....				1288 12 1
Net total of profits at Adelaide and London, for 1846-7, after every deduction, including the 1000*l.* voted to the directors at the last meeting				9383 14 2
				£18,107 0 8
From which deduct dividend paid in July	£3242	5	0	
Ditto ditto in January.....	3242	5	0	
Ditto, on colonial shares	21	10	9	—£6506 0 9
Balance of undivided profits on 31st May, 1847				£11,600 19 11

The directors beg to recommend that from this balance of 11,600*l.* 19s. 11d. the sum of 1600*l.* be applied in further reduction of preliminary expenses account; that 1000*l.*, or 10 per cent. (as by the Deed of Settlement), upon the net residue of the year's profits, be added to the reserve fund; and that, from the balance, a dividend of 5 per cent. per annum, clear of income-tax, upon the instalments paid up, be made payable half-yearly, in July and January next, as usual. Should you adopt this recommendation, the effect will be as follows—viz.: The preliminary expenses account will be reduced from 11,600*l.* to 10,000*l.*; the reserve fund, commenced last year only, will be 2050*l.*; and, after meeting the dividend of 5 per cent. per annum, clear of income-tax, a small surplus will go forward to the next account. The annual accounts to 31st May have been duly considered, and will now be submitted for your confirmation. A statement of the average weekly assets and liabilities of the colonial establishment to 30th November (the date of the balance) will also be read for your information. During the last year a vacancy occured in the direction, by the decease of the late G. Davenport, Esq., which the board temporally supplied, by appointing J. B. White, Esq., to act until this meeting. Mr. White requests your suffrages, to confirm him in the direction. He is one of the oldest shareholders, and the court gladly recommend him to your notice. Sir J. Pirie, Bart., also goes out of office, as the second vacancy to occur in rotation. The auditors, J. Brown, Esq., and F. Ladbroke, Esq., also retire, pursuant to the Deed of Settlement; but these gentlemen are eligible for re-election, and offer themselves accordingly. The local board at Adelaide has been further strengthened, and now consists of G. Morphett, Esq., R. F. Newland, Esq., and E. I. S. Trimmer, Esq., gentlemen of high standing in the colony. The London directors have the pleasure of acknowledging the efficient services of the local board; and also the continued attention of your able manager at Adelaide, Edward Stephens, Esq., to every measure which can advance the bank's interest.

The imperative necessity of furnishing more capital for the growing trade of the colony, now so firmly planted, and so increasing in population and wealth, obliged the directors to call up recently the last 2*l.* 10s. upon the shares. The board wished the state of the money-market had been more favourable; but, when it became a question whether the bank's efficiency should be impaired for a lack of funds, the directors felt assured that the proprietors would not desire delay, and they duly appreciate the promptitude with which the call was met. Should the progress of South Australia continue advancing, as seems likely to occur, it may, hereafter, become expedient to consider the propriety of increasing the number of shares in the company. The long-pending discussion with Government for a charter of incorporation seems at length approaching a favourable termination; and the board have great reason to expect, in a few weeks, the formal grant of such a charter as they can recommend to your ready acceptance. The directors believe that the bank has now regained a stage of progressive prosperity; and they point to the steady reductions making in preliminary expenses account, the addition to the reserve fund, and the increased dividend, as confirming this opinion. If favoured with a continuance of the success now marking their efforts, the preliminary expenses will, in a few years, be wholly liquidated; and the amounts of profit now put to that account will swell the dividends so as to leave a handsome return for your capital. The board assure you, that they have closely examined all the affairs of the bank, and they consider its position was never more promising; their unceasing efforts will be used to increase its success.

The CHAIRMAN, in moving the adoption of the report, congratulated the meeting on the present state and future prospects of the company. He believed that their affairs were in a thoroughly sound condition, and that they would have the satisfaction of assembling in coming years with increased prosperity. Objections had been taken by some parties, that the directors should have made a call at the time they presented such favourable accounts; but he was enabled to show that, under the peculiar circumstances of the case, that call was rendered absolutely necessary for the future success and good government of the company. The greater part of the profits, which appeared in the accounts for this year, had been made upon the working capital of the bank in Adelaide, amounting to little more than 100,000*l.*; but within a few weeks the balance against the bank had risen in consequence of the improving circumstances of the colony to 150,000*l.*; and this was the proximate cause of making the call. At this stage of the proceedings he would not detain them further, but he was quite prepared to go into any detailed explanation which the proprietors might require. The hon. gentleman then moved the resolution, for which, and the other resolutions subsequently proposed, see advertisement.

Mr. G. GILLMAN seconded the motion, and expressed himself fully satisfied with the report. There were two features about it that must come home with peculiar force to all practical men. The first was the recommendation which it contained that their funds should not be embarked in speculations, which were now so rife in South Australia. The second was, that it brought under their notice every species of bad or doubtful debts—so that they would not go on, as some other companies had done, paying large dividends out of capital, and in the end find they had no profits at all. Feeling, then, that the report was *bond fide* and strictly honest, he did say that they had excellent prospects before them; and he was convinced that, if the concern were as well managed in the future as it had been in the past, the proprietors would not have to content themselves with a dividend of 5 per cent.

In answer to a remark from the Rev. T. Timpson,

The MANAGER said, that the working capital in the bank at Adelaide, during 1846, did not much exceed 100,000*l.* The wool season began in November, and continued through the months of December, January, and February; and during that period a considerable amount was remitted home in wool bills, which could not appear in the accounts referred to by Mr. Timpson, which were to the end of November, 1845. So that he was quite right in saying that, by these remittances, the capital in the bank at Adelaide was brought down to 100,000*l.*—The resolution was then put from the chair, and carried unanimously.

Mr. J. R. TODD proposed the second resolution, declaring a dividend of 5 per cent. per annum, free of income tax.

Mr. J. BREWSTER seconded the motion, because he was confident, after hearing the report read, that the dividend would be paid out of the profits, and not the capital of the company.

Mr. G. F. ANGAS thought it was unnecessary to keep so large an amount of specie on hand as was now in the bank at Adelaide, and suggested that persons who had deposits there should be required to give some notice before they withdrew those deposits.—The CHAIRMAN said, that with so large a sum as 50,000*l.* standing to the credit of the current accounts of depositors, it was absolutely necessary to keep a large amount of specie on hand, for they might be suddenly called on to provide large sums for purchases of lands by their customers. With regard to making an arrangement with the depositors, it was quite in their power to make an arrangement such as that referred to by the hon. proprietor, with parties who received interests on their deposits; but that could not be done in the case of depositors having current accounts, to whom no interest was paid by the bank. The adoption of a notice, therefore, could only extend to parties depositing money and receiving interest for it.

The resolution was then agreed to unanimously.

Mr. R. FOSTER moved, and Mr. R. OAKES seconded, the next resolution, filling up vacancies in the direction, and re-electing the auditors, which was also carried without a single dissentient.

Mr. BROWN proposed, and the Rev. Mr. TIMPSON seconded, a vote of thanks to the chairman and directors, which was carried by acclamation.

Mr. DIVETT acknowledged the compliment, and repeated that he was quite prepared to enter into any explanation of details which the meeting might require. He concluded by moving a vote of thanks to the board of directors at Adelaide, and the managers there and in London.

Mr. WHEELTON (late Sheriff of London and Middlesex) seconded the motion.

Mr. H. WATSON said, that at present he was not satisfied with the making of the call of 50s. a share, and he had certainly expected that some more complete explanation would have been given with regard to the necessity for it.

The CHAIRMAN: The call was rendered necessary by the late monetary crisis, which would have obliged the company to pay a very high rate of interest had they gone into the market for the purpose of obtaining the accommodation which they required. Another reason was, that a portion of their capital was locked up for a time, and was not at that period available. He could assure the hon. proprietor that the call was not made before the directors felt that a necessity existed for increasing their working capital. If they had not taken that step, or if Mr. Stephens, by any instructions sent out to him, had been induced to curtail the accommodation to customers, serious injury would have been sustained by the company hereafter. He believed that the call would prove to be a most profitable operation, for he had the satisfaction of being able to state that, notwithstanding the condition of the money market, it had been paid up with astonishing promptitude. The pressure upon the company at the time the call was made, arose from the drafts of Mr. Stephens, which that gentleman was obliged to issue for the accommodation of the regular customers of the bank.—Mr. WATSON took it for granted that the money was properly employed; but it seemed to him that the circumstances alluded to by the chairman might be taken as a reason for their not over-trading, and he conceived that they were over-trading if they went beyond the capital in hand. Would Mr. Wheeler favour him by stating the amount which the call produced?

The MANAGER: In round numbers, about 18,000*l.*; and the whole of the call had been paid up, excepting a very small portion only.

Mr. WATSON: Then it appeared that their position last year was this—in case of any unforeseen loss occurring, they were in a position to call upon the shareholders for 18,000*l.*, whilst they had set apart, as a reserve fund, the sum of 1000*l.*—making together 19,000*l.* Now, in any sudden emergency, all this sum would have been available; but what was their present position? Why, that in case of absolute need, they had only a reserve fund of about 2000*l.* to fall back upon. Now, this was the ground upon which he disapproved of the call.—The CHAIRMAN said that, in the opinion of the directors, the circumstances which had arisen, and which they considered justified them in making the call, were of a pressing character. He believed, however, that it was extremely improbable that such an emergency could recur; and that if the business of the colony went on as it did at present, and the capital of the bank was brought fairly into play, in a very short time they would be able to pay a much higher rate of dividend. He further believed, that they would be obliged by-and-bye to increase their capital.

After some further conversation, Mr. WATSON expressed himself perfectly satisfied with the explanation given by the chairman: and the motion for a vote of thanks to the managers and the directors at Adelaide was carried unanimously.—Mr. WHEELER having briefly acknowledged the compliment, the meeting dissolved.

SOUTH AUSTRALIAN COMPANY.

The eleventh annual general meeting of the above company was held on Wednesday, at their rooms, 4, New Broad-street, City.

G. F. ANGAS, Esq., in the chair.

The minutes of the last annual meeting having been confirmed, the following report of the board of directors was read by Mr. M'Laren, the manager:—

The directors of the South Australian Company respectfully present to the eleventh annual general meeting of proprietors the following brief report of the affairs of the company. The yearly accounts to the 31st October last, received from Mr. Giles, the colonial manager, have been duly examined by the board, and approved of. These include inventories of the company's property, the total amount of which is 309,623*l.* 8s. 3d. The property on hand, at the time of the last annual meeting, has been valued, in general, at the same rates this year as last; rates which have been fully justified by sales during the year. The mineral lands, of which the purchase was mentioned in the last report (although not included in the inventories then presented), have been valued by the directors at what they consider a very moderate rate—a rate far below their value, in the opinion of the colonial manager. He, however, left the board to affix to that purchase what value they thought proper. The expectation entertained, as stated in the last report, of a prospective improvement in the general circumstances of the colony, has been realised. Free emigration from England, under the judicious control of her Majesty's Colonial Land and Emigration Commissioners, has been regularly maintained; and very considerable numbers of [redacted] and others have arrived in South Australia from the neighbouring colonies, so that a great increase in the population has been effected during the last year. Our returns afford gratifying evidence of the progressive improvement:—

The rental from the town buildings, and those at Port Adelaide, at the 30th September last, amounted to				£2805 12 6
While the net receipts from the wharf, during the year ending 31st Oct. last, amounted to				585 12 1
The rent roll of the country lands, at 30th September last, amounted to...				3693 2 6
				£7084 7 1

The total quantity of country land leased is 14,256 acres for agriculture, at an average rent of 5s. per acre; and 1847 acres for pasturage, at about 1s. per acre. The sales of stock during the year, ending the 31st October last, were as follows:—

Of sheep, averaging fully 10s. per head.....	£844	12	5	
Cattle, horses, &c.	1938	11	9	—£2783 4 2
The value of sheep and cattle killed for rations during the same period was				899 6 8
				£3682 10 10

Part of last year's clip of wool was received and sold previously to the annual meeting, as mentioned in the last report. The sales were on the whole unsatisfactory; the quantity fell short of what we had reason to expect; the condition in which a considerable portion of it was received was unfavourable, and about one-third of the entire quantity did not arrive till September last. The board had, previously to the last annual meeting, instructed the colonial manager to terminate the engagements of the superintendents of the flocks and herds, and had conditionally engaged a person going out to the colony, who was thoroughly conversant with the management of sheep. Under his directions, and those of an experienced colonist, the present year's clip of wool has been got up. Upwards of 200 bales were received in time to be included in the sales in May. Our brokers reported most favourably of the general condition, quality, and getting up of the entire parcel. It averaged fully 1s. 3d. per lb., which was considerably above the general run of South Australian wools included in these sales. The net proceeds amounted to 2890*l.* 11s. 3d., being only about 600*l.* less than the total receipts from wool last year—while the remainder of this year's clip will realise, in all probability, upwards of 2000*l.* The natural increase of the flocks and herds during the year, has been 11,355 lambs, 543 calves, and 30 foals; the gross number, at 31st October last, was 35,379 sheep, 3693 horned cattle, 102 horses, and about 150 goats. The following is a summary of the revenue for the last year (exclusive of that to be derived from the mineral lands of the company), including a statement of the increased value of stock:—

Town rental, including wharf, warehouses, and buildings at the port, as per rent roll				£3391 4 7
Country rentals, as per ditto.....				3692 2 6
Sales of cattle and sheep.....				2783 4 2
Value of cattle and sheep killed for rations				899 6 8
Net proceeds of last year's clip of wool				3489 5 5
Increased value of the stock of sheep at 31st October, 1846, as compared with 31st October, 1845				1425 0 8
Increased value of the stock of cattle at same date				208 0 0
				£15,889 4 0

In the present imperfect development of our mineral property, it is impossible to state any precise sum which may be received during the next year from that source. Mr. Giles estimates the clear profit for the year at 5000*l.* In presenting the preceding summary, the directors submit the following remarks. The increasing trade at Port Adelaide justifies the anticipation that the income from the wharf and warehouses there will improve considerably during the present year. The rent roll of country lands is rapidly increasing. Upwards of 2500 acres additional were leased during the colonial year, ending 31st October last; and between that time and the 23d January, more than 1000 acres were let to respectable tenants. Owing to the difficulties of some of the tenants, the manager thought fit, during the last year, to make deductions amounting to about 300*l.*; but there is reason to expect that in future the rents will be fully paid. The circumstances of our tenantry are now very comfortable, particularly in Lynedoch Valley. The crops which they had just gathered in (our manager writes under date 23d January) "excelled both in quality and quantity those of every previous year;" "*for several miles the farms are well cultivated, regularly fenced, and studded with homesteads; the stack-yards full of stacks, and every sign of the improved condition of the agriculturists.*" The total expenses in the colony, exclusive of those connected with the mineral operations, as reported and appropriated by Mr. Giles, are as follows:—

On account of the cattle	£824	0	0	
On account of the sheep	5196	8	0	
On account of the town and country lands, the wharf and port buildings, and all other charges	835	0	0	—£6937 8 0
The net amount of charges in London during the last year has been.....	1062	2	2	
For interest, payable chiefly to the South Australian Banking Company and on debentures	2907	18	8	—£4870 0 10
				£11,807 8 10

Having, at the last annual meeting, ascertained the sentiments of many of the shareholders in favour of the board issuing debentures, to enable them to reduce the debt to the South Australian Banking Company, on which a high rate of interest was paid, a circular was addressed to each shareholder on the subject, the result of which was, that 15,300*l.* was obtained at 5 per cent. per annum, repayable in three, five, or seven years—chiefly in seven. During the year, the debt to the South Australian Banking Company has been reduced nearly 13,000*l.*, besides which, the advances made by the Bank of South Australia, for the purchase of the mineral lands, has been repaid to the extent of 6000*l.* In regard to these lands, the board has thought proper to proceed with great caution. Such a purchase not having been anticipated, the instructions previously sent to the colonial manager did not, of course, embrace the working of any mines. Nor, on the other hand, could the directors, with their necessarily defective information, enter into any engagements with such parties in this country as applied for sets of these lands. The disadvantages arising from these causes, however, are only temporary. The principal one is, that the quantity of ore received since the time of the last general meeting has been less than was expected. The extravagantly high wages paid at first for mining labour also limited our manager's operations, while the facility of obtaining ore, at first experienced, did not long continue, but was succeeded by hard ground, which required to be worked through. The wages have fallen considerably of late, although still very favourable for the industrious miner. During the year we have received about 300 tons of ore; of these about 200 tons were sold at Swansea, so recently as on the 24th June. The general average price has been about 15*l.* A considerable portion of the ore would have brought a much higher price had it been sold by itself; but as the whole had been obtained near the surface of the ground, a good deal of earthy matter and inferior ore had been sent, which, of course, reduced the average. Our agent at Swansea, however, says in his letter of the 24th June—"The general opinion of all practical men who have seen these ores is, that they will increase in produce (that is in richness), as they go down in depth, in a similar way to other South Australian ores which he mentions. This opinion is in perfect accordance with the accounts received by the board from Mr. Giles. By the last Overland mail they received advices from him to 20th March, from which they make the following extracts:—"I left the mines yesterday, and feel much satisfaction in saying, that they never looked so well as they do at present: the lode at the Kangaroo shaft, at a depth of 13 fathoms, is 12 feet wide; it is now 14 feet in length, and the captain computes that every fathom sunk by these dimensions upon the lode will not yield less than from 30 to 40 tons of ore. There has been a great improvement within the last few days; and one of our steadiest miners, lately arrived, who *has been at work in the Wheal Maria, in Devonshire, up to his departure, declares that he saw no lode in that mine that would yield an equal quantity of ore per fathom with our lode, the Kangaroo.* The workings in the other shafts are also improving. We have now 100 tons of ore on hand. The South Australian Company may lease to five or six companies blocks of land on which there are rich stones of ore cropping out upon the surface, say from 50 to 100 acres each. These would not interfere with our present Kanmantoo operations, which are all on one hill, on an area of 100 acres. Besides the mineral lands, in the Mount Barker District, two other sections at least of the company's lands, selected solely for their superior agricultural properties, contain copper ore. From one of these, in Lynedoch Valley, a small lot of 6 cwts. was sold at Swansea, on the 24th June, at 17*l.* 16s. per ton; in regard to which our agent there reported—"it is a very pretty sample of ore, it embraces all the favourable appearances that a miner could wish for, and indicates great prospects of abundance of copper." The colonial manager is of opinion that the lodes found in that section run through the company's property there, which amounts to 4000 acres.

The directors have uniformly studied to avoid exciting too sanguine expectations from the acquisition of their mineral property, but they think it right thus to furnish the shareholders with the same means of judging of its value which they themselves possess; and they do most sincerely congratulate the proprietors on the auspicious purchases, and on the confident expectation which we are entitled to entertain, that, from that source, and from the rapidly improving state of our other departments, and of the colony generally, we shall very soon reap, not only an ample return for all our expenditure, and all our anxiety, but a fair compensation for the unproductiveness of the last four or five years. Your directors much regret that they are unable to advise you to declare a dividend on this occasion, but they have every reason to believe that by your adoption of the plan which they are about to propose to you, this will be the last time on which they will be compelled to make such a painful announcement. The amount of debentures which the directors have been enabled to issue having been so limited, and the state of the money-market such as to subject some portion of your debt to a high rate, and others to a probable increase of interest, it becomes necessary, with a view to have your now large and rapidly increasing income available for a dividend next year, at once to liquidate your debt. The board, therefore, submit to the general meeting, which has been made special for that purpose, in terms of the Deed of Settlement, the propriety of authorising the directors to issue to each proprietor whose calls have been paid up, half the number of his existing shares, at the rate of 15*l.* each—the whole of which having been paid up in three equal instalments, these new shares shall be, in all respects, on a par with the old shares of 25*l.*—the first instalment to be payable on the 20th July next, and the other two at an interval of three month *each, say on the 20th October,* and the 20th January,* 1848—a discount at the rate of 6 per cent. per annum being allowed on the latter calls to those who may pay the whole at once. The directors beg to recommend this measure to the favourable consideration of all the proprietors, and its adoption by them. This course will obviate the necessity of offering any portion of the proposed issue of shares to strangers, by whom, on these terms, the board have every reason to believe they would be immediately accepted.

The Deed of Settlement provides that two directors retire annually by rotation, who are, however, re-eligible. The directors who retire this year are Sir C. Eardley Eardley, Bart., and J. R. Todd, Esq., who offer themselves for re-election. A vacancy in the direction having occurred, in consequence of the lamented death of G. Davenport, Esq., who was very exemplary in the discharge of his official duties, the directors, agreeably to the terms of the Deed of Settlement, made temporary provision for supplying such vacancy until the annual general meeting, by appointing C. Roberts, Esq., lately one of the auditors of the company, who offers himself to the general meeting as a candidate for that office.

The auditors also retire annually, agreeably to the Deed of Settlement. John Bazley White, Esq., who has for many years faithfully discharged the important and confidential duties of that office, offers himself for re-election; and William Richards, Esq., whom the directors, with much pleasure, appointed until the general meeting, offers himself for election.

In conclusion, while the directors again express their regret at their inability at present to resume the payment of a dividend, they think the shareholders must be of their opinion—that the only thing wanting to our complete success, is to get rid of our debt; and thus to secure our income to the payment of interest to ourselves, and not to others.

The position of our affairs in the colony is, in every respect, improved. The onward progress of South Australia is certain. Her real interests are more understood and consulted in the Colonial-office. Capital and labour are both pouring in, and ample and remunerative employment found for both, so that no dependancy under the British Crown presents more points of attraction, or contains more of the elements of prosperity. In the general improvement we must always largely share. This your directors are fully persuaded will appear in a manner most satisfactory to all—in our future balance-sheets, and profit and loss accounts. The directors have only further to renew the assurance that, while honoured with your confidence, their unceasing efforts shall be devoted to the most judicious and profitable management of your affairs.

Col. TORRENS rose, and moved the adoption of the report; observing that it was a highly satisfactory document; and that if the debt of the company were liquidated in the manner proposed by the directors, they would to a certainty have a very fair dividend in future years.

Mr. VALENTINE KNIGHT seconded the motion.

The Rev. T. TIMPSON thought the sum of 11,000*l.*, the expense of working the company, was very heavy, seeing that 15,000*l.* was the total amount of receipts.

The CHAIRMAN—That 11,000*l.* must be taken to include the sum of 2907*l.*, which had been paid as interest on the company's debt.

The Rev. T. TIMPSON observed, that the sales of cattle and sheep during the year amounted to 2783*l.* 4s. 2d., and the produce of the clip of wool to 3489*l.* 5s. 5d.—together 6272*l.* 9s. 7d; whilst there was expended on account of cattle 824*l.*, and on account of sheep 5168*l.* 8s. Now, he should like to know if it was really necessary that, for the sake of receipts amounting to only 6272*l.*, they should expend as much as 5992*l.*?

The CHAIRMAN said, that notwithstanding a great increase had taken place in the quantity of stock, yet the expenditure was no more than it was last year.

Mr. DIVETT, M.P.—The subject had been under consideration, and he was enabled to state, that the receipts might be considerably increased, inasmuch as the large number of emigrants going out to the colony would require an extensive supply of meat and stock; consequently those beasts which were unsaleable a few years ago, would now go off at a great advantage. On account of the number of sheep and cattle owned by the company, he doubted very much if the present expenditure could be fairly complained of. Indeed, he was convinced that it was absolutely necessary.

The Rev. T. TIMPSON recommended a reduction by sale of the quantity of stock now in the company's possession.

Mr. WATSON took the same view of the question, and quoted in his support the authority of Mr. Morphett, a gentleman who had visited the colony, and who had distinctly stated that the company did not derive a sufficient income from their live stock.

The CHAIRMAN said, the board had acted upon the recommendation of the hon. proprietors, and the results of their measures were an improved system of management, a diminution of expenditure, and the arrival of their wool in this country in much better condition than before these measures were carried out. The sales of the cattle and sheep in the colony amounted to not less than 2783*l.* (Hear, hear.)

Mr. SMITH asked if, in granting setts for mining operations, royalties had been reserved to the company?

The CHAIRMAN: The manager in the colony had had instructions sent out to him to reserve royalties, and not to dispose of any of the mineral lands outright.—The resolution was then put by the chairman, and agreed to *nem. con.*

Mr. DIVETT said, that he had long regarded the company's debt with much disquietude; and after considering the question in every point of view, he had arrived at the conclusion, that if the company acceded to the proposition referred to in the report, this would be the last occasion on which the directors would meet the proprietors without having to announce a dividend. It was clear that they must get rid of their debt, and the heavy interest which they had to pay for it, before they could be in a condition to appropriate their income to the purpose of a dividend; and, upon full and mature deliberation of the subject, the board was convinced that the best way to accomplish this was to issue to each proprietor whose calls had been paid up half the number of his existing shares, at the rate of 15*l.* each—that was at a discount of 10*l.*—the new shares to be in all respects upon a par with the old shares of 25*l.* Assuming that all the proprietors took the new shares, a larger sum would be produced than was actually required to liquidate the debt; but the surplus might be applied to the payment of the debentures, which had been issued at 5 per cent. The number of original shares upon which all the calls had been paid was 9168. Half that number of new shares, to be issued at 15*l.* instead of 25*l.*, would amount to 4584; which, if the whole were paid up, would produce 68,760*l.*, to meet a debt of from 55,000*l.* to 60,000*l.* If any of the proprietors objected to take the new shares, he had no doubt that they might be disposed of to the public with the greatest ease. As it was essential that the new shares should be paid up rapidly, he proposed that the first instalment should be made on the 20th July, the second on the 20th October, and the third and last on the 20th January next year; and that a discount, at the rate of 6 per cent. per annum, should be allowed to all who paid up the whole of the instalments at once. Having remarked that, in the opinion of some of the ablest financiers in the metropolis, the measure now proposed was the best that could be adopted, the hon. gentleman concluded by moving a resolution for carrying the proposition into effect. Capt. MEYNELL, R.N., M.P., second the motion.

Mr. MILLER asked, if the directors themselves were prepared to take their full proportion of the new shares?

M. DIVETT said, he had not consulted his brother directors upon that par-

* By the resolution adopted at the meeting, it will be seen that the times for payment of the two latter instalments were extended to the 20th of Nov., and the 20th February.

ticular point; but as far as he, as a shareholder and director, was individually concerned, he would take any portion whatever that might fall to his lot.

Capt. MEYNELL intimated that he would do the same.

Mr. FUSSELL (the largest shareholder in the company) said, that, knowing what he did of the affairs and management of the company, and being convinced that it was necessary to raise the sum of money which the new shares would realise, he fully intended to take his portion, and he trusted that the proprietors universally would follow his example. If they did, they would go on gloriously. So great was his confidence in the ultimate success of the company, that he had never parted with a single share, and had very lately refused 20*l.* a share.

After some further discussion, the periods for making the second and third instalments of the new shares were extended to the 20th of Nov. and the 20th of Feb., and the resolution, so amended, was carried unanimously.

The vacancies occurring in the direction were then filled up, and a vote of thanks to the managers, Mr. M'Laren, in London, and Mr. Giles, in Adelaide, having been agreed to, and acknowledged by the former gentleman, the meeting separated.

BIRMINGHAM AND OXFORD JUNCTION RAILWAY.

The adjourned special meeting of this company was held at Dee's Royal Hotel, Birmingham, on Wednesday, June 30.—P. H. MUNTZ, Esq., in the chair.

Mr. MOSLEY asked, whether it was to be understood that the directors had still no communication to make, which should put an end to the necessity of further proceeding with the business of the meeting, in opposition to the directors?—The CHAIRMAN was not aware of any such communication. He had read the remarks made at the last meeting, and the resolutions which were then come to, from which it appeared that they adjourned to see whether the directors would call a meeting to approve of the bill before Parliament, and make modifications in it. With the first of those objects it would be impossible to comply; because, from the length of time it was necessary to give notice for such a meeting, it would not be held before the middle or end of July, by which time Parliament would, most probably, be up. The other part of the resolution carried at the last meeting, appeared to have for its object the bringing about an arrangement between the two parties. He could not see how that company could interfere in such an arrangement, as it was, in fact, merely a matter for the consideration of the London and North Western and the Great Western Companies themselves, though he should be very happy if that (the Oxford and Birmingham) company could be instrumental in bringing about an arrangement between them.—Mr. MOSLEY was not prepared to say what course ought to be taken, in order to bring about an arrangement, but he felt assured one might be come to, by which the unfortunate differences existing in the company would be brought to a close. He asked, why the directors were not called together at stated times?—and how it was that they were not summoned to sanction the acts of those to whom the power of conducting the business was delegated? He had been a director from the 10th of March, but did not know when they met.—The CHAIRMAN said, that the directors did not meet at any fixed periods: the business was conducted by committees, as in other companies, and when it was deemed necessary the directors were called together to confirm their acts.—Mr. MOSLEY had seen it stated elsewhere that propositions for an arrangement had come from a director of that company, and he wished to ask, whether that was by the authority of the board.—The CHAIRMAN replied in the negative. No individual had authority to make such a proposition, and he was not even aware that any conversation had taken place on the subject.

Mr. MOSLEY had heard with regret that the efforts of that individual had not been successful, not from any opposition from his party, but from the other; but he was obliged to that individual for the part he had taken, whoever he was. He, and those with whom he acted, had no desire to obstruct any arrangement which had been made in good faith, not inimical to the interests of the shareholders, however they might have wished to have opposed some of the details, had they been brought before them at an earlier period. In order, therefore, to put the shareholders and the directors in a better position he would move—"That this meeting, considering the main objects of the bill now before Parliament, to enable the Birmingham and Oxford Junction Railway Company to make certain alterations in the line of the Birmingham and Oxford Juncton Railway, and to purchase the Stratford-upon-Avon Canal Navigation, and for other purposes, to be consistent with the interests of the shareholders, desires to express its concurrence in the provisions of such bill, expecting those which confer power on the Great Western Company to subscribe for, or to purchase and hold shares in, this company, under the alleged agreement, to the terms of which the shareholders in this company object, and which enables the Great Western Railway Company to raise capital for the purpose, and to vote in respect thereof, of which provisions, in the present state of the matter, this meeting cannot approve; and this meeting understanding that certain shareholders have petitioned the House of Lords against such bill on Standing Orders, respectfully request those shareholders not to proceed further with such petition, provided the objectionable provisions before referred are withdrawn; and doth hereby express the desire of the shareholders that, subject to the withdrawal of such provision, the said bill should be allowed to proceed without further opposition in Parliament."

Mr. JONES (of Liverpool) seconded the resolution.

The CHAIRMAN said that no notice of such a resolution had been given; and, as the Standing Order of Parliament required that certain notice should be given of a meeting in which a bill was approved, such a resolution could have no effect. It was just possible, however, that if the opposition was withdrawn, the bill might be allowed to pass the House of Lords.—Some conversation ensued, which resulted in the resolution being withdrawn for a short time.

Mr. MOSLEY expressed his regret that the resolution had not been allowed to pass, and said that under the circumstances it would not be necessary to protract the meeting. He complained that, as a director, he was not allowed free access to all papers connected with the company, and stated that in order to allow further time to see whether any arrangement could be come to between the two parties, he would move—"That this meeting be, and the same is hereby adjourned, until Monday, the 12th day of July next, at one o'clock in the afternoon, at Dee's Royal Hotel, in Birmingham, when the consideration of all and singular the matters mentioned and referred to in the requisition of the 29th day of April last, under which this meeting is held, will be resumed, if necessary."

Mr. TURNER seconded the motion.

Mr. WILLIAM MATTHEWS would not have troubled the meeting, but he could not allow it to go forth to the world that the directors of the Birmingham and Oxford Railway Company had been guilty of oppression towards the shareholders. He recollected once hearing the late Mr. O'Connell say, in reply to some observations of the public press, that he was the best abused man in Europe, and he really thought the same would apply in part to their board. He considered Mr. Mozley's observations most severe, uncalled for, and, he thought, quite undeserved. If the charge of not endeavouring to effect a compromise applied to any person, it must be to Mr. Mozley himself. That gentleman had repeatedly expressed the most anxious desire that some compromise should be effected; and he thought it lay with that gentleman, who was really so anxious upon the subject, to make the offer of a compromise. It was now clearly a question between the two great companies, and there was no use in concealing it. It was viewed as such by the shareholders, it was considered such by the public, and the Legislature was inclined so to view it; and if any arrangement could be come to consistent with the honour and reputation and just obligations of the directors, most happy should he be to see it brought about, but on no other terms. Mr. Matthews then entered into a long defence of the directors.

Considerable discussion ensued, but, ultimately, the resolutions were carried: it being understood that if, in the meantime, any proposition should be made that was likely to lead to an arrangement, that steps should be taken for further adjourning the meeting, without the shareholders being called together.

IMPROVEMENTS IN RAILWAY ENGINES, CARRIAGES, &c.

[Specification of patent granted to Thomas Waterhouse, of Edgely, in the borough of Stockport, in the county of Chester, cotton manufacturer, for certain mechanical improvements applicable to railway engines and tenders, and to railway carriages of various kinds.]—*Newton's London Journal.*

The first part of this invention is intended to facilitate the passage of rail way engines, tenders, and carriages around curves, by allowing each wheel to move independently of its fellow. This is effected by forming one of each pair of wheels with a long nave, or boss (the patentee recommends that its length should be equal to one-half the diameter of the wheels to which it is applied), which is bored to fit the axle, and works against a shoulder on the same—it being kept in contact with the shoulder by a moveable collar, or washer, secured to the axle, outside the nave of the wheel, by a key; the other wheel is fixed to the opposite end of the axle. Another mode of carrying out this part of the invention, consists in dividing the axle at the centre into two parts, and fixing additional bearings to the lower framing of the carriage, for the purpose of supporting the inner ends of the two parts of the axle, by which means the wheels are permitted to rotate perfectly independent of each other.

The second part of this invention consists in the application to railway engines, carriages, and tenders, of an apparatus for sounding signals, by means of compressed air. The apparatus consists of a force-pump, for compressing air into a receiver, or receivers, beneath the carriage, from which it can be admitted, by the guard, or attendant, into a railway whistle, or other suitable instrument for sounding signals. The pump is worked by a lever, or levers, acted upon by hand, or by the motion of an excentric fixed on one of the axles of the carriage, or by any suitable mechanical contrivance for communicating motion from the axle; and the apparatus is so constructed, that when the air is compressed to the required degeee, the pump will cease working until the pressure is reduced.

The patentee claims, firstly, giving a revolving action to one wheel on each axle of a railway engine, or tender, or of railway carriages of various kinds, wholly independent of the action of the opposite wheel on the same axle, in one case without interfering with the rotation of the axle itself; and in the other case, by dividing the axle into two parts—so that, in either case, the first-mentioned wheel may travel at any speed, faster, or slower, than the opposite wheel, suited to the curved line of rails which it may have to pass over or along, or to other circumstances, rendering such variation of speed between two opposite wheels desirable. Secondly, an improved apparatus for sounding a signal-whistle, to be applied to railway engines and tenders, and to railway carriages of various kinds, in order to cause the whistle to be acted upon by condensed air, obtained by the motion of the carriages in travelling along the line, or otherwise, instead of by steam; and which whistle being, therefore, wholly independent of the steam of the engine for its action, may be applied to any convenient part of any engine, or tender, or railway carriage, or any number of carriages, and thus furnish a signal by which the guards may communicate with each other, or with the engine-driver, from any carriage of a train, however distant it may be from any other carriage, or from the engine.

MAMMOTH ENGINE.—A monster engine, on Stephenson's principle, has just been completed by Messrs. Forster and Co., of Liverpool. It is intended for passenger trains: has four driving wheels (each 6 ft. diameter) connected; boiler, 16 ft. long; and its immense weight may be estimated by the fact, that 13 horses were employed to draw it through the metropolis to its destination—the South Eastern Railway.

The solemn opening of the Copenhagen Rothschild Railway will take place on Saturday, in presence of the King and Queen, and on Sunday will be free to the pubile.

Transactions of Scientific Bodies.

MEETINGS DURING THE ENSUING WEEK.

Society.	*Address.*	*Day.*	*Hour.*
Western Scientific Institut.	Leicester-square	Monday	8½ P.M.
Medico-Botanical	32, Sackville-street	Thursday	8 P.M.
Royal Botanic	Inner Circle, Regent's-park	Saturday	3½ P.M.

GEOLOGICAL SOCIETY.

JUNE 9.—Sir H. T. DE LA BECHE in the chair.

G. Richardson, Esq., and J. W. Kirshaw, Esq., were elected fellows.

"Microscopical Observations on the Structure of the Bones of the *Pterodactylus giganteus*, and other Fossil Animals." By J. S. Bowerbank, Esq.—"On some Parts of the Alpine-Mediterranean Geology of South-Eastern Europe." By Dr. Ami Bone.—The author gave details of the position of Nummulitic Rocks in Greece, Albania, and Italy; and showed that they were intermediate between the tertiary and cretaceous series, or partly belonging to both.—Mr. Lyell read a notice "On the Age of the so-called Nummulitic or 'rotten,' Limestone of Alabama."

INSTITUTION OF CIVIL ENGINEERS.

JUNE 29.—Sir JOHN RENNIE (President) in the chair.

This was the last meeting of the session, and it was necessary to read several apparently excellent papers in abstract, because there was not time for giving them *in extenso*.

The first was, "On the Advantages and Economy of maintaining a high degree of Cleanliness in Roads and Streets, with an Account of the Construction and Operation of the Street Sweeping Machine," by J. Whitworth, Assoc. Inst. C.E. It treated of the general advantages of street cleanliness, the comfort of the pedestrian, the avoidance of impurity to the air from the decomposition of dirt on the pavement; less dirt and dust being carried into the houses, a saving in the cost of maintenance of roadways, and a diminution of the draft of carriages.

The next paper read was, "An Account of the Sea Defences of Romney Marah, commonly known by the name of Dymchurch Wall, and the Probable Origin of the Marsh itself, or the manner in which it was Reclaimed from the Sea," by James Elliot, jun., the resident engineer. Romney Marsh, properly so called, forms a triangle, the base of which would be a line drawn from Romney to Appledore, and the apex at Hythe, and comprises about 24,600 acres. It is probable that this marsh was caused in the first instance by the formation of a natural barrier of shingle nearly where Dymchurch Wall now stands, by which the sea was excluded, and that the first artificial works were executed by the Romans when they held possession of the country. They consisted of the erection of cross walls running from the natural barrier (the "Full") to the hills, at the base of which the ancient river Limene ran, the chief of these (the Rhee Wall) ran nearly in a straight line from Romney to Appledore, and it was at that spot where probably the main work was performed. Upon the supply of shingle from the west being cut off by the extraordinary accumulation at Dungeness Point, the natural barrier at Dymchurch gradually became weakened, and it was necessary to take some steps to prevent its total destruction. The first measure adopted was the erection of an inland wall, at some little distance at the back of the "Full," and afterwards the construction of large stone groins on the front, or sea-side, at right angles to the line of coast, in order to increase the deposit of shingle. However, as the supply of shingle gradually decreased, on account of the constant movement to the eastward, and as all that escaped in that direction was permanently lost, these means were found insufficient, and a system of "arming" with brushwood and timber piling was adopted. This was found to answer the purpose for a considerable period, but it also, in the course of time, gradually became insufficient, and it was found necessary at length, after numerous experiments, to adopt a stone facing, with an average slope of about 8 to 1 up to high-water mark, gradually increasing in steepness from that point, and terminating with a curve of 7 ft. radius. The stones, which were laid in a bed of concrete where they were most affected by the waves, were of different sizes, averaging from 18 to 6 in. in depth, the largest of them being in the middle, where the greatest wear and tear took place, and at which point rows of sheet piling were also driven for additional security. This plan was adopted by the author, after mature deliberation on the reports of Mr. Rennie and Mr. Walker, and a very careful examination of the locality. Part of the wall has now been standing for 10 years, and has required a very trifling amount of repair, while the annual expense has been reduced from 10,000*l.* to 4000*l.*, with every prospect of a still further reduction being effected, as upwards of two-thirds of the work is now permanently completed.

The last paper was "On Ocean Steam Navigation," by Captain Henderson, Assoc. Inst. C.E., calling attention to the fact, that, in this great maritime nation, naval architecture was neglected as a science, as was proved by the experimental squadrons, and some of the ordinary steam vessels lately built. That neither the public nor science had derived any advantages from these costly experiments, owing to the absence of any information in a systematic form, that correctly described the relative size, capacity, resistance, power, or speed of existing steam-ships—the present tonnage and nominal horse power for all purposes of analogy being quite fallacious.

To obviate this difficulty, the author proposed the adoption of a tabular form, which should exhibit at one view the relative dimensions of different vessels, and the ratio of length and depth to breadth, the displacement, and weight of the hull and the stores, showing the actual capacity for weight, deducting the engines and fuel, giving the capacity for armament or cargo. An approximate estimate of the relative resistance was shown, by the area of the midship section, and other elements of resistance, and comparing the ratio of the displacement to the resistance. The power of the engines and the ratio of the tonnage, displacement and area of midship section to the horse power, together with the average speed at sea, were given to enable a fair comparison to be made of how far each ship approached the form of least resistance. The difficulty of ascertaining these might be overcome by the test of a dynamometer like that fitted to her Majesty's ship *Rattler*—the experiments upon which gave the resistance at 15 lbs. the square foot at 6½ knots, and 30 lbs. at 9½ knots. Some observations of the proportion of power to tonnage, and on the relative advantages of paddles and screw for long voyages, were given—showing that with paddle vessels designed for a voyage of 3000 miles, a proportion of three tons to one horse power had been the average. He considered that for a distance of 4500 miles, a screw vessel, with a proportion of 4½ tons to one-horse power, would be the best for steam communication by the Cape to Australia. He urged the advantages of having records of what had been done; and invited builders and engineers to place in the archives of the Institution of Civil Engineers the information sought for, in a tabular form, as a means of advancing steam navigation, upon which the welfare and prosperity of Great Britain so much depended. Several other papers were announced, which had been sent in at too late a period of the session to enable them to be read.

The Book of South Wales, the Bristol Channel, Monmouthshire, and the Wye. A Companion and Guide to the Railways, Watering Places, Shores, Scenery, Antiquities, Unexplored Regions, Mineral Districts, Towns, and other Objects of Interest throughout the Southern Division of the Principality. With a Picture of Bristol. By CHARLES FREDERICK CLIFFE. London: Hamilton, Adams, and Co., Paternoster-row; and local booksellers.

We have derived much pleasure from a perusal of this very comprehensive guide-book; which, indeed, enters with a minuteness worthy a work of higher pretension into the history, topography, and legends of the various interesting localities of South Wales—abounding in happy incident and well-told anecdote; the maps and descriptive engravings, also, are numerous, and executed in a highly-creditable manner. We shall take an early opportunity of returning to Mr. Cliffe's work, for the purpose of compiling a notice of the iron-works, &c., of South Wales; while, in another column, will be found extracts on the iron and copper trades, affording a fair specimen of the nature and composition of the work, which we cordially recommend to our readers.

EXPLOSION OF GUN-COTTON.—On Thursday week, an alarming explosion of gun-cotton took place at the congreve rocket manufactory of Mr. R. Wade, West Ham, Essex, which was attended by the destruction of a large portion of the factory, and the loss of three human lives. The premises, which were divided into several apartments for the manufacture of the explosive gun-cotton, are situated on the marshes between West Ham Town and the River Thames. The three deceased men—M. Geary, H. Tuft, and R. Redford—were employed in filling a rocket, 18 in. long, and 2½ in diameter, which was made to contain 12 lbs. of the material. Layers of the cotton are put into the rocket, and are compressed in it by means of a monkey—a piece of wood which is raised by a rope—when, in falling, by pressure, it compresses the cotton in the rocket.—At an adjourned inquest on the sufferers, Dr. Ryan (professor in the Royal College at Portsmouth, and formerly lecturer at the Polytechnic Institution), in answer to inquiries from the coroner and jury, said that he held that the "monkey," technically so called, which was used in making the congreve rockets, was highly dangerous when brought to bear upon gun-cotton, although it might be comparatively harmless when applied to gunpowder. Further than that, he held it to be highly dangerous to attempt to drive or compress this cotton into any given space; and it would, in his opinion, make very little difference whether that operation were performed by rapid concussion or gradually by means of a lever, although it must be admitted that the latter operation was less objectionable than the former.—Mr. John Braby, the superintendent of Mr. Wade's manufactory, described the operation of making the rockets, and the use to which the "monkey" was applied. It was lifted by a lever, and then thrown down on a spindle, which pressed the rocket.—Dr. Ryan was again questioned by the coroner, and said that, in some cases, a piece of gun-cotton might be placed upon an anvil, and struck 20 or 30 times with a hammer; whereas another piece taken from the same parcel would explode on the first stroke. The want of uniformity in the action of gun-cotton he considered to be its greatest danger.—Mr. Edward Horton Willmott, assistant to the lecturer on chemistry at the London Hospital, said he had prepared a considerable quantity of gun-cotton for Mr. Wade's use, and he believed the accident occurred from the compression of air in the tube.—The coroner remarked, that he had received an important letter from Dr. Letheby, one of the physicians at the London Hospital, in which he expressed his belief, that in the present case it was either the percussion or friction of the hard-rammed cotton which gave rise to the accident, and not to the supposed heat evolved by the compression of the air lodged between it. About 400 grains of it may be compressed into a cubic inch with perfect safety, provided the pressure is used slowly and steadily; whereas it infallibly explodes if you attempt to drive it into that space by blows or percussion. The coroner summed up the evidence; after which, the jury found that the deaths were accidentally caused—appending to their verdict the expression of their conviction that it was dangerous to drive or compress gun-cotton into any required space, and recommending the discontinuance of the monkey where so much danger was to be apprehended.

IRISH RAILWAYS.—The Midland Great Western Railway was opened on Monday last for public traffic to Enfield—a distance of 26½ miles. The first train started at six o'clock, the second at seven, and neither could accomodate the number of persons who sought places. The return trains were crammed to excess. Thus has the undertaking already established its importance to the public.—There were 874 men employed on the Cork and Bandon Railway during the past week. The works are progressing rapidly.

The total amount of the annual products of the United States is estimated at $1,000,000,000.—*New York Sun.*

REPEAL OF THE COPPER ORE DUTIES.

[Continued from last week's Mining Journal.]

After this explanation, I think your lordship will perceive in the above table no symptom of a disposition in the Chilians to withhold their ores from us. Doubtless, there is a portion of the produce of the Chilian mines smelted at home; but I have shown that such was the case before the tariff existed, and such will always be the case as long as the forests remain unexhausted, which provide the only fuel which the country affords. The accidents of trade, the great demand for guano—nay, even the very increase in the quantity of ores sent home to us—all have tended to increase the means of smelting in Chili by the return of coals from England, and the smelters must not be surprised, if, in proportion as their imports of ores become greater, the quantity of coals exported should be greater also. Their fear of serious competition, however, I firmly trust is needless. Coal, as ballast, may be rendered in Chili at a comparatively low rate; but what is that cheapness? One of their own correspondents in the year 1845 shall answer this. He informs us that he "had had an offer to place a quantity of coals on shore at Coquimbo, at 2*l.* per ton;" but he says that it would also be necessary to send out bricks to make the furnaces. Another memorialist of that day published that "our merchants has received formal intimation that they would receive no more copper ores from Chili;" and, to my great surprise, the documents of the present time contain the same prediction, in the same words, utterly regardless of the events which have disproved it. Your lordship may safely disregard such prophecies. Our prosperity in smelting rests on firmer ground than the arrival of a chance cargo of coals in Chili. Of all trades that of a smelter is least able to bear uncertainty. Let any one who doubts this, observe the processes in the smelting-works of England—the skilful mixture and ready use of ores of various qualities, fuel in abundance and at hand, and the economy of money and time which all these appliances afford, pushed to the utmost. And I must beg your lordship to remember that the question is not whether copper can be smelted in Chili, for this has always been done; but whether the smelting can be greatly increased by the use of coals costing in that country 2*l.* a ton, which same coals are used at Swansea at 3*s.* 6*d.* a ton—one of the former memorialists says 3*s.*: 10 tons of this coal, I am assured, must be, under the most favourable circumstances, used to make one ton of copper, and in ordinary cases from 15 to 20 tons.

We have been told, however, that Conception is now producing coals in great abundance, and that smelting establishments are being constructed for their consumption on the spot. I have no documents to prove whether this is or is not correct, but the probabilities are greatly against its accuracy.

In the first place, I have been assured by one largely concerned in the trade, that the notion of smelting in Conception is a mere chimera; that he has inquired into the subject, and has had samples of the coal sent home for experiment, but that he found it weak and totally unfit for copper smelting. Moreover, if there is a cheap and abundant supply of coal at home, why do the Chilians send to England for it? Can there be two prices in the same market? and if not, either the Conception coal is an inferior article, or it must cost 2*l.* a ton at Chili. Wood must be cheaper than this; and the copper so made, though not fit for rolling, does very well for certain inferior purposes, and, therefore, finds a ready sale in the European markets, but at reduced prices. I dare say that your lordship may have heard of a certain quantity of this copper, which was sold in London in the course of the last autumn. It fetched about 76*l.* per ton. The greater part was bought by a French merchant, and exported by him; and shortly afterwards the same man exported a large quantity of English copper purchased at the market price, which I think was then somewhat less than 90*l.* per ton. If the Chilian copper was not inferior, why did it not fetch the same price as the English?

As the petitioners rest their case almost entirely on Chili, I am obliged, at the risk of being tedious, to touch on one more of their topics, before I pass to any other country. It forms their fourth plea. "That owing to the duties recently imposed on foreign copper or es imported into Great Britain, and the jealousy manifested in Chili respecting them, the trade in foreign ores is likely to be greatly diminished;" and again, "that the Chilian Government view the duty as a hostile and unfriendly act, which they would meet by encouraging smelting in their own and foreign countries."

Here again, I must ask Mr. M'Gregor to answer the petitioners. He has given us the tariff of Chili; and I beg your lordship to bear in mind, while I enumerate a few of the articles in that tariff, that the duties paid in this country on copper ores are capable of producing at the utmost only 10 per cent. *ad valorem*.

In Chili, all textile fabrics, woollens, cottons, silks, and linens, pay *ad valorem* duties of ..... 20 per cent.

If made up in various ways	30 to 35 "
Cutlery and brass wares	20 "
Looking-glasses	35 "
Other glass	20 "
Pottery	20 "
Beer and cider	50 "
Paper, iron ware, &c.	20 "

In short, it appears that the ruling duty is 20 per cent. on all articles not especially favoured with higher duties.* Assuredly, there is nothing in all this to justify, nor (if we presume the Chilian Government to be composed of reasonable men), nothing to create a jealousy adverse to their dealings with us; and, as I have shown that their exports to this country have greatly increased under the operation of the system established in 1842, I cannot see in the reiterated complaints of the petitioners that their remittances are in danger, anything more than an attempt to frighten your lordship from a sober consideration of the subject.

The following table, which is taken from the *Mining Journal*, shows the fluctuations in the trade at Swansea:—†

PRODUCE OF FOREIGN MINES SOLD AT THE TICKETINGS AT SWANSEA, FOR THE YEARS (ENDING RESPECTIVELY DECEMBER 31) 1845 and 1846.

Mines.	1845. Tons.	1845. Amount.	1846. Tons.	1846. Amount.	Increase. Tons.	Increase. Amount.	Decrease. Tons.	Decrease. Amount.
Cobre	23741	£ 261,453 8 6	14755	£168,439 8 6	....	....	7986	£93,014 10 0
Chili	3806	112,347 0 6	6701	159,634 0 6	2895	£47,287 0 0	....	....
Cuba	5591	78,072 8 0	6390	69,446 19 0	799	....	....	8,625 9 0
Santiago	7930	115,200 19 6	4908	69,014 10 0	....	....	3122	46,186 9 6
Coplapo	666	12,459 16 0	1020	20,038 1 6	354	7,583 5 6	....	....
Burra Burra, South Australia	....	....	1638	18,133 4 0	1038	18,183 4 0	....	....
Kapunda ditto	....	....	831	16,726 1 6	831	16,726 1 6	....	....
San Jose in Cobre	2931	36,786 17 0	1147	11,746 3 0	....	....	1784	25,040 14 0
Pennsylvania	395	4,372 1 0	675	5,982 13 6	280	1,610 12 6	....	....
Montecute, South Australia	237	3,453 6 0	264	4,370 12 6	27	917 6 6	....	....
Australia	....	....	258	4,254 1 6	258	4,254 1 6	....	....
Kaw-aw, New Zealand	675	11,578 19 6	249	2,635 7 0	....	....	426	8,943 12 6
Havanna	....	....	169	1,333 12 0	169	1,333 12 0	....	....
Kaumantoo	....	....	78	1,269 14 0	78	1,269 14 0	....	....
Sydney	....	....	67	645 6 0	67	645 6 0	....	....
Valparaiso	283	4,414 11 0	....	....	....	....	283	4,414 11 0
Total	45255	£01,134 17 0	39450	£563,366 9 6	6796	£99,350 3 6	13601	£186,225 9 6

The 5th plea is, "that exertions are now being made to establish smelting-works in France and Holland, as well as the United States."

The name of France appears but in one of the petitions, and is very tenderly dealt with there. But when this matter was last discussed, in 1845, France was the Cheval de Battaille which was to over-ride all objections to the repeal of the duty. We were told that vast smelting-works were in course of construction; that their prospects of success were unequivocal; that already we had lost a great part of our usual export of copper to France, and the rest would surely follow.

Now, I think there is an useful lesson to be learnt from this change of tone: for it covers the fact, that the experiment of smelting copper has been made in France, and has failed. It teaches that we should not be frightened from our policy by the noise of an experiment not yet tested by time; and that it is not prudent to infer success for any speculation in foreign countries, merely because it is adverse to our own. It is true, that in 1844 and 1845, attempts were made to establish smelting-works in France, in connection with rolling mills which have existed for many years. But the cost was found to be too great. The proprietor has again returned to our market, and is one of the best customers that we have; and our export to France in the next year, 1845, increased by above a thousand tons.

[To be concluded in next week's Mining Journal.]

GAS.—In the Court of Common Pleas, on Thursday, the case Croll *v.* Edge being an action for the infringement of a patent for alleged improvements in the manufacture of gas, and application of its powers, its transmission, and measurement, was heard.—The Chief Justice was of opinion, that the objections to the specification were good, and directed the jury to find for the defendant on all the issues which raised those objections, without reference to the others; leave, being reserved for the plaintiff, to come before the court above, to have the verdict entered up for him.

* Furthermore, the letters of Mr. Waddington, published with the memorials, hint at the present existence of a duty on ores exported.

† I have no means of showing what has occurred at Liverpool during the same time; but there evidently must have been a great increase in the importation of ores in the last year at that place, because the total decrease throughout the kingdom in 1846 has been only 94 tons of copper.

Mining Correspondence.

ENGLISH MINES.

BARRISTOWN.—We have sunk through several small branches in flat-rod shaft, under the 28 fm. level, dipping south, thinly mixed with lead, which we consider to be dropping to the part of the lode cut off at the 18 fm. level. The lode in the 18 fm. level end, west of flat-rod shaft, is at present taking a more perpendicular course—its underlay now is about 1 ft. to a fathom, and worth about 20*l.* per fm.; we are sinking a winze about 4 fms. behind this end, on a part of the lode taking down against the slide—it is now about 6 ft. under the level, with a rich branch of lead about 3 in. wide, worth about 8*l.* per fm.; our object in sinking this winze is to prove the lode, if it is cut off so far west, as the slide becomes smaller in this direction, and the lode stronger. In the 12 fm. level end west the lode is greatly cut up with slides, and very irregular—it is worth about 10*l.* per fm.; the stopes under this level, on middle lode, are worth about 16*l.* per fm., and rather improving in regularity as we get west; the eastern stopes, on the same lode, are rather improved since my last, worth about 8*l.* per fm.; the winze, sinking on middle lode, under the 18 fm. level, is still maintaining the same course down, with small spots of lead, and no doubt will, until we intersect some part of the main lode heaved south, which may again improve it; in the adit end east, driving towards Nangle's, we have a change of ground—more the appearance of what we had at Nangle's shaft; the men are now able to drive nearly double the number of fathoms in the month. At Clon Mines, we are still costeaning, but have discovered nothing further of any importance.—T. Angove; G. White: June 25.

BEDFORD UNITED.—At Wheal Marquis, the lode in the sump-winze, in the 90 fm. level east, is 3 ft. wide, and worth 38*l.* per fm.; and in this level east the lode is 3½ ft. wide, and worth 20*l.* per fm. There has been no lode taken down in the 70 fm. level east, in the winze, in this level—the lode is 2½ ft. wide, producing saving work. The 58 fm. level east remains without alteration. At Liscombe, the lode in the adit level is 3 ft. wide; and in the rise, in this level, the lode is 2½ ft. wide, producing good stones of ore. The lode in the south engine-shaft is 3 ft. wide—spar, mundic, and ore, very promising. In the adit level east the lode is 18 in. wide, producing good stones of ore. We weighed, at Morwelham, on Friday last, April ores 116 tons (21 cwts.) 16 cwts. 2 qrs., and sampled May ores computed 103 tons (21 cwts).—James Phillips: June 29.

COATLITHE HILLS.—The level east from A shaft has been driven about 3 ft. during this week; the vein is still principally composed of mineral clay, rider, and good stones of lead ore—on the whole, there is an improvement. The horse level has been driven 1 fm. during this week.—J. M. Paul.

CUBERT SILVER-LEAD.—We have this day held the public setting for July; the ground in the engine-shaft is much the same as noticed in former reports, still rather hard and very wet. The lode, going west at the 85 fm. level, is about 2 ft. wide, in a hard nature of spar and mundic, and worth about 8*l.* per fm. for lead; in the end, going east in this level, the lode is large, worth at this time 20*l.* per fm. for lead—a very promising end. In the 25 fm. level, driving east, the lode is 2 ft. wide, kindly, and worth 4*l.* per fm.; the western end, in this level, is suspended for the present; we have put the same men to sink a new shaft from surface in the east of Falmouth land (west). The 15 fm. level, driving east, we have also suspended, and have removed the same men to cross-cut from Trebiskin lode to the west of the halvan course in the 25 fm. level. I am glad to say, that the appearances of the mine never looked so promising.—R. Rowe.

DEVON AND COURTENAY CONSOLS.—The end driving east, on south lode, in the 30 fm. level, is looking just the same as last reported; the end driving west, on the same lode, is improved in appearance—the lode is 2 ft. wide, composed of spar and killas, with spots of ore; in the deep adit, on south lode, the lode is about 2 ft. 6 in. wide, composed of spar, killas, mundic, and copper ore; in the shallow adit, on north lode, the lode is about 3 ft. wide, composed of spar, mundic, and flookan.—E. Northey: June 29.

DRAKE WALLS.—I see no material alteration in our prospects since my last. The sumpmen have commenced sinking below the 50 fm. level, ground favourable for sinking. We calculate on sampling 14 tons of tin for this month, and I shall be ready to sample on the 12th of July.—R. Williams: June 28.

EAST ALVINNEY.—*June* 25.—I have just returned from this mine, and am happy to inform you we shall have a first-rate mine here. The lode in the shaft is now worth 30*l.* per fm., and it appears gradually improving, both in size and quality. We broke, last week, a large chestful of solid pril tin ore, too rich to stamp; we intend to dress it with brass-wire sieves, and we can then sell it for grain tin. I have planned out a place for stamps, and intend, on Monday, to clear off a piece of ground for the floors, so as to stamp the coarse part of the lode, which will also all make rich stamp-work. We shot a hole last Friday, in the deepest part of the lode in the shaft, and broke a stone of tin 21 lbs. weight, just as solid as a bar of steel, that will all sell for grain tin. We are now just realising that which I have always expected. You will bear in mind, that I have always told you that white iron, grey mundic, wolfram, and mica, are the very indications of a rich branch of tin in a granite stratum, all of which you have here. I have enclosed some large diamonds of tin that were broken yesterday. After a hole is shot, we can pick up sieveful of the same quality, both large and small; they fall out of the vugha, or cavities, of the lode; I have strictly cautioned the men to be careful, as they are valuable. We have fixed our V-bob, and are preparing the rods, so as to break the angle; we shall then sink and stope both right and left.——*June* 28.—Since I wrote you on the 25th, I find we must get a large chest, so as to hold 3 or 4 tons of the diamond tin and best work. The chest must be kept under lock and key, as there are so many persons coming to the mine and taking samples. I have told Gregory not to allow any to be taken, it is equal to money. I never saw so rich a lode of tin; I have seen larger lodes, but never so rich.—J. Sparoo.

EAST CROWNDALE.—The ground in our engine-shaft is not quite so good as when last reported upon—it is composed of a close blue killas, and occasionally small branches of spar, containing mundic and spots of copper ore. The ground in the adit level, towards the Rix Hill lodes, is composed of killas of a close texture, and occasionally branches of spar, peach, and mundic—very favourable ground for tin. We have been obliged to stop the shaft sinking on the north lode, on account of the great increase of water; so soon as the adit level gets under the shaft, we shall be able to raise the ground at less than half the price it will cost at present to sink it; the lode in the shaft is about 2 ft. wide, composed of peach, spar, mundic, killas, and good spots of tin. Our engine and pitwork in good order.—S. Paull: June 26.

EAST TAMAR CONSOLS.—Harrison's shaft is sunk 7 fms. under the 46 fm. level; the lode in the shaft is 2½ ft. wide—fluor-spar and ore, saving work. The lode in the 46 fm. level north is 1 ft. 8 in. wide, work of a coarse quality; the lode in the 46 south is 18 in. wide—fluor-spar and silver-lead ore, work of a good quality. The lode in the 38 south is 15 in. wide—fluor-spar and silver-lead ore, a very kindly lode. At Charlotte's, the lode in the 11 fm. level north is 20 in. wide, producing good stones of silver-lead ore.—B. Robins.

GREAT MICHELL CONSOLS.—No lode has yet been taken down in the 35 fm. level. The shaftmen are now engaged dividing and casing down shaft from the 22 to the 35 fm. level. In the winze, sinking below the 22 fm. level, west of the engine-shaft, the lode is producing a little saving work, very promising.—T. Richards: June 29.

GUNNIS LAKE.—At Chilsworthy, the lode in Bailey's engine-shaft is 3 ft. wide, composed of gossan, capel, spar, and mundic, with stones of ore occasionally. In the 12 fm. level west we continue driving north on the cross-course. W. Richards: June 29.

HOLMBUSH.—The ground in the diagonal shaft is still favourable for sinking, and the branches continue their size, and to produce good stones and spots of copper ore; at present we propose sinking 15 fms. below the 120 fm. level, before cross-cutting south to intersect the branches that have passed, or that may, in the course of sinking that depth, pass, through the shaft in that direction. The lode in the 120 fm., west of the great cross-course, is 12 in. wide, composed of capel, mundic, and stones of ore; the lode in the 120 fm. level, east of Hitchins's shaft, on the north part, is 18 in. wide, composed of a large quantity of mundic, containing spots of rich yellow ore. We are still engaged in clearing attle from the 110 fm. level, east of Hitchens's shaft, on the south part; the lode in the 110 fm. level south is 20 in. wide, composed of flookan, spar, and stones of lead, all of which is drawn to surface, and stamped, after a selection is made of the best. The lode in the rise, above the 100 fm. level, has not been taken down during the past week; it is worth 8*l.* per fm.; we have been endeavouring to make the communication to the 90 fm. level, by the side of it, being softer ground; we are so near to holing, as to hear each other speak from the two points now wrought on, and we expect to accomplish it within a day: we have discovered neither branch or lode in stripping down the side of the 100 fm. level; the men will resume driving the 100 fm. level south shortly. The lode in the 90 fm. level south is 20 in. wide, composed of flookan, spar, and stones of lead, saving work. Our small stamps continue to work well, and we are preparing, as fast as possible, our large one, which we hope to see completed and fit to work within the time promised. We weighed at Calstock Quay, on Friday last, May ore, 73 tons 7 cwts. 2 qrs.; and sampled June ores, computed 60 tons.—W. Lean.

ILAM.—Saturday last being our taking day the bargains were as follows:—In the 67 fm. level, east of Robins's shaft, the lode is still large, with stones of copper at times—price for driving, 6*l.* 5*s.* per fm.; in the end west of shaft, driving towards Brown's shaft, the lode still continues its promising character, as reported last week. In the 42 fm. level, west of shaft, the lode is not quite so large as when I wrote you last; in this end I am expecting to meet with a bunch of copper every day—price for driving, 6*l.* 15*s.* per fm.; and with regard to this lode making copper, I do not think it ever will make in branches of copper; but, when it makes, it will be a large mass of ore; and, as I am expecting you here this week, I have abandoned sinking Robins's shaft until I see you.—Isaiel Ephague: June 29.

HAWKMOOR.—The lode in the 15 fm. level, east of Hitchins's shaft, is 3 ft. wide, composed of capel, spar, mundic, and spots of ore.—P. Richards.

HEIGNSTON DOWN CONSOLS.—The lode in the 20 fm. level, east of north shaft, is 3 ft. wide, producing very good work; in the 20 fm. level west the lode is 3 ft. wide, composed of peach, spar, gossan, and tin, good work. We have cleared up Buddle's adit shaft, and find the adit to be in bad repair, being, so far as it has been seen, nearly full of stuff. We are at present engaged in clearing and securing the same, and hope shortly to be enabled to report the exact distance north the end is from this shaft.—W. Richards: June 29.

KIRKCUDBRIGHTSHIRE.—Herewith I beg to hand you my report of our prospects and prices given for July month—viz.: The shaftmen, having finished cutting ground for waggon-road and winze-plat, are now cutting ground for dome, and fixing pent-house, in order to sink the next sump. The lode in the 40 fm. level end west is about 4 ft. wide, not so good as we have seen it, worth from 5*l.* to 6*l.* per fm.—set to 6 men the month, at 4*l.* per fm. The lode in the 30 fm. level end west is about the same width, and worth about 12*l.* per fm.—set to 6 men, at 5*l.* 5*s.* per fm.; the end east on the caunter, in this level, is also large, but poor—set to 4 men, at 50*s.* per fm.; the first stopes near the junction are 12 ft. wide, worth 30*l.* per fm.—set to 9 men, at 4*l.* 4*s.* per fm; the second stopes, near the shaft, are not so good as they have been, worth now 8*l.* to 9*l.* per fm.—set to 6 men, at 55*s.* per fm.; the stopes, east of shaft, in the back of this level, continue to look well, worth 12*l.* to 15*l.* per fm.—set to 4 men, at 35*s.* per fm.. The lode in the end west, in the 20 fm. level, is large, upwards of 5 ft., producing about 2 tons of lead per fm.; we have also set 2 men to rise in the back of an old pitch in the roof of the 20 fm. level, west of shaft, to intersect a branch of ore dipping that way from the shaft, at 50*s.* per fm. We are looking out, and hope to get a vessel to ship the ore by the end of this week.—J. Buzzo: June 28.

LANIVET CONSOLS.—The greater part of our tutwork operations since the meeting in February last has been driving the 50 fm. level east and west, the 30 fm. level east, sinking winze for ventilation, and sinking diagonal shaft. In the 80 fm. level east the leader part of the lode on the south part is 1 ft. wide, producing but a small quantity of ore; this level is many fathoms east of the ore ground in the level above; we have cut through the lode in the 80 west, which is 3½ fms. wide—its leader part, on the south, is 18 in. wide, the ground being more soft than on the north part; we hope to have shortly an improvement in this end, it being 40 fms. from Baker's shaft, which shaft can hereafter be sunk for ventilation, and also for drawing stuff. The ground driven through at the 60 is kindly ground. The 70 fm. level is not far in advance of the 80. This level has been suspended for some time past—it can be resumed again if needed. The 80 can be ventilated hereafter, by sinking from 60. We have completed the diagonal shaft to the bottom of the 80, except casing, which will soon be finished. We have also cut a plat at 60 for angle-bob. There cannot be much done in sinking below the 80 without a lift; I have already explained this—it should be ordered as soon as possible. Much of our success depends on sinking, there being a good course of ore from 3 to 4 ft. wide gone down in the bottom of the 80, about 15 fms. east of the shaft, which cannot be worked until drained; but it is very likely, as the shaft progresses downward, we shall be able to sink here also, the greater part of the water in this mine being in the deepest part. I am happy to inform you, that we have not found any increase of water by means of Tretoil Mine having been abandoned; the water has been to adit in that mine nearly a fortnight—it is not now likely that it will ever injure this mine; and, if not, our present engine will carry us at least 20 fms. deeper, which is very likely (from the appearance of the ore gone down in the 80, and from the prospects of the western part of the mine) to improve; it certainly holds out fair promise of a good remuneration. You will please to to take into consideration changing the flat-rods—that is, having wood instead of iron to prevent the frequent breakages; this was explained in my report for the meeting in February last. If we have a plunger-lift from 80 to 60, instead of drawing-lifts, it will save some of the breakages, but, ultimately, they will have to be changed. The 80 fm. level east, and the winze sinking below, remains much as last reported.—Henry Williams: June 25.

LEWIS.—The lode in the 60 east is 2 ft. wide, worth about 35*s.* per fm. for tin; the lode in the 60 west is 2½ ft. wide, producing some tin, and very promising; since our last report we have been driving the 50 east on the south side of the lode, in order to drain the same; we have pricked into it in different places, and think it equally as productive as when last reported; the lode in the 50 east, on south branch, is 6 in. wide, but the floors and branches make it worth 10*l.* per fm. for tin. The lode in the 40 east is 2½ ft. wide, worth 6*l.* per fm. for tin. We have this day set 21 tribute pitches, the average tribute of the same is 7*s.* 9½*d.*; two of the above were set at the back of the 60, one at 1*s.* 4*d.*, and the other at 1*s.* 9*d.* At or about the end of this month we expect to sell 9 tons of tin. I think, on the whole, our prospects are very cheering, and promising good interest for all capital expended.—S. S. Noell: June 26.

MENDIP HILLS.—The lode in the 38 fm. level, south of Stainsby's shaft, is become much larger than I have hitherto seen it in this part, composed chiefly of dark-coloured flookan and soft spar, with stones of good quality lead at times, ground favourable for driving, present price 40*s.* per fm.; in the winze, sinking below this level, we are down 6 fms. 4 ft., where the lode is about 3 ft. 6 in. wide, composed of quartz and a little flookan, intermixed with stones of lead, ground rather harder for sinking than it has been. In the slag department our progress with the water-course continues favourable. We have 440 fms. of launders fixed in their places—the beds of slag, from which we are still removing the top rubbish, continue to look well.—F. C. Harpur.

SOUTH TAMAR UNITED.—The water is forked 40 fms., but, owing to some old timber being across the shaft, with a pile of rubbish on the same, it is with difficulty we are getting down our lift; but I hope we shall soon get through this stoppage. The men in the adit level are getting on in clearing and securing the same as expeditiously as possible.—B. Robins: June 29.

SOUTH WHEAL MARIA.—The cross-cut north is driven about 9 fms. from the shaft, and there have been two lodes discovered in driving the last 10 ft.; the first 7 fms. from the shaft is 18 in. big, composed of mundic, quartz, &c., with some good yellow copper ore in the capel, and is without any underlay. The next lode north is 10 ft. from this, and is nearly 2 ft. big; this appears to be that on which the adit level has been driven on upwards of 50 fms.—it is composed of prian, mundic, &c., with yellow copper ore interspersed throughout, with a pretty flookan on the south wall, and underlaying south about 6 in. in a fm., with two well-defined walls; eventually, I have great confidence that this lode will be found productive. We have sunk about 3 fms. on the next lode, north from the surface, which we calculate is about 18 fms. from the last named—it is about 18 in. big, and without any underlay, composed of a pretty gossan, with spots of yellow copper ore in it; the shaft is at the foot of the hill, about 100 fms. west on the course of the lode from the Tamar River. The cross-cut south is driven about 8 fms. from the shaft, and is without any important alteration.—G. Francis: June 24.

SOUTH WHEAL TRELAWNEY.—The ground in every part of the shaft is as favourable as we could wish to see it, and standing without timber, and throughout is strongly mineralised; during the last month, we sunk 3 fms. through it—we have set 1 fm. to sink at 12*l.* After this is accomplished, we shall cut ground for cistern at the adit level, fix the lift, &c.; the men that contracted to hole the adit, are still at work driving both ways—viz.: west from the shaft, and south on the course of the lode—and a more promising lode I never saw; it is 2 ft. wide, composed of beautiful gossan, barytes, prian, and spots of lead, underlying east 18 in. in a fm. We expect to make the communication within a fortnight, quite in time against the shaftmen have sunk 6 ft., fixed lift, and divided down the shaft; after which they will be able to sink several fathoms, without the aid of the engine, which is all complete, with piston packed for working, when wanted.—W. Lean: June 26.

SILVER VALLEY.—At the engine-shaft, in the 50 fm. level, we are continuing to cross-cut north, as a great quantity of water is issuing from the country north of the lode or south branch, which we have cut through; it is about 3 ft. wide, and has just the same appearance as stated in last report—the lode in the 40 fm. level being cut in three parts, and the water coming from the present end at this level (50), we have no doubt but that there is one or more branches further north. At the silver mine, in the 30 fm. level west, there are small veins or branches from the north, forming with the lode, and have a little improved it in appearance; it is 16 in. wide, composed of flookan, carbonate of iron, and mundic. The lode in the 20 fm. level west is about 14 in. wide, containing a large proportion of mundic, a little flookan and quartz, with small cubes of lead occasionally; the lode in the eastern part of the stopes, in the back of this level, is at present poor, and we are now inclining more to the west; in rising in the direction of the shoot of silvery ground, the lode is about 2 ft. wide, producing a little saving work. At Wheal Brothers, the deep adit level west is cleared and secured to the present level, and which is 115 fms. from the western whim-shaft, and is 5 fms. 1 ft. west of Oak shaft; the lode here is in three branches, inclining fast towards each other, and we have commenced driving the end.—S. Richards: June 28.

TRELEIGH CONSOLS.—In the 110 fm. level, east of Christoe's, the lode is about 10 in. wide, but though small, and but little mineral, yet it has a kindly appearance, and I think will soon be better for ore. The winze, below the 100, east of Christoe's, will be sunk on the 110 end, to ventilate the same, and will be commenced in a very kindly part of the lode; the back of the 100, over this, is taken away by the tributers. In Garden's shaft, below the 90, it will require about a fortnight to complete the sump to the 100 fm. level; it is still in very hard ground. In the 90, west of ditto, the lode at present is small, but producing a small quantity of ore, not to value. In the 80, east of ditto, the lode is 1 ft. wide, a part of which is very good, worth about 20*l.* per fm.; the winze below the 80 west will be sunk in the present 80 fm. level end—the lode is worth 10*l.* per fm.; this end must be suspended while sinking this winze. In the 70, west of Garden's, the lode is 15 in. wide, with a more promising appearance, yielding good stones of ore. In the 60, west of ditto, the lode is 2½ ft. wide, and has a very good appearance, with stones of ore. In the 70, west of Symons's, the lode is 5 ft. wide, with a small quantity of ore in the south part of the lode, nothing to value. In the 60, west of ditto, the lode is 20 in. wide, of a better quality than usual, worth 7*l.* per fm. In the adit east, on Wheal Parent lode, the lode is 15 in. wide, much improved in appearance and value; it will produce about 1 ton of ore per fm., worth, I should say, 4*l.*; the quality of this ore has not been proved by us.—W. Symons: June 25.

UNITED HILLS.—In the 90 fm. level, eastern end, the lode is 2½ ft. wide worth 5*l.* per fm.; in the western end the lode is 3 ft. wide, worth 15*l.* per fm.; the lode in the stopes is 3 ft. wide, worth 20*l.* per fathom. In the 80 fm. level, eastern end, the lode is 3½ ft. wide, worth 18*l.* per fm.; west of cross-cut the lode is 2 ft., worth 15*l.* per fm. In the 70 fm. level the lode is 2½ ft. wide, worth 5*l.* per fm. The 60 fm. level has been suspended since August last. The shallow adit was suspended last survey-day. At Wheal Charles, in the 50 fathom level the lode is 2 ft. wide, not producing any ore. At Wheal Sparrow, in the 40 fm. level the lode is 3 ft. wide, worth 9*l.* per fm. In the 30 fm. level end nothing has been done during the past week; the men have been engaged rising against the winze sinking from the 20; in the stopes the lode is 6 ft. wide, worth 15*l.* per fm. In the 20 fm. level we expect to communicate the winze to the 30 fm. level in the course of a few days. We stopped Williams's engine on Saturday last, to change loops of underground bob, and to do the other necessary shaft work, in consequence of which the water rose to the 80. We hope to resume the working of the 90 by Wednesday morning. The boiler was carried yesterday from South Towan to Williams's engine; we shall get it ready for working with all possible speed.—T. Trevenen; R. Williams: June 29.

WEST WHEAL JEWEL.—In the 115 fm. level, east of cross-cut, on Wheal Jewel lode, lode 20 in. wide—this lode is improved, looking more promising for ore than when last reported. In the 100 fm. level, west of cross-cut, on same lode, lode 2 ft. wide, composed of spar, prian, with a branch of ore on the south side, worth 3*l.* per fm. In the winze, in the bottom of the 85 fm. level, west of cross-cut, on the same lode, lode 2½ ft. wide, worth 3*l.* per fm. In the 70 fm. level, west of Williams's cross-course, on same lode, lode 9 in. wide, producing half a ton of ore per fm. In the 30 fm. level, west of Quarry shaft, on Tolcarne tin lode, lode 1 ft. wide, worth 7*l.* per fm. In the 12 fm. level, west of Quarry shaft, on same lode, lode 1 ft. wide, worth 6*l.* per fm.; in the stopes, east of Quarry shaft, on same lode, lode 3 ft. wide, worth 25*l.* per fm.; in the stopes, east of Pryor's winze, on same lode, lode 2 ft. wide, worth 23*l.* per fm.; in the adit end, west of Quarry shaft, on same lode, lode 15 in. wide, worth 10*l.* per fm. In the 12 fm. level, east of old sump shaft, on same lode, lode 6 in. wide, worth 5*l.* per fm.—R. Johns; T. Bray: June 28.

WEST WHEAL MARIA.—The lode in the eastern engine-shaft is about 4½ ft. wide, 15 in. on the north part of which is producing good stones of ore; and, from the present indications, I think we may expect improvement shortly, as the ground is changed for the better in sinking; the lode in the western engine-shaft is about 3 ft. wide, composed principally of capel, spar, mundic, and a little ore. In the 54 fm. level, east of this shaft, the lode is about 18 in. wide, producing spots of ore in places; in the cross-cut south, in this level, the ground is a little improved for driving.—T. Rodda: June 29.

WHEAL ADAMS.—We have been getting on well with the engine-shaft since our last report, and have succeeded in reaching the 50 plat, which will be cleared and secured as soon as possible. The stopes in the bottom of the 40 are producing ¾ ton of lead ore per fm. The lode in the winze, sinking to the south of Tonking's pitch, is divided and hove by the black flookan vein, on which a very good bunch of lead ore is deposited. We have cut another quartzose vein in the northernmost cross-cut, extending west at the 28 fathom level, but it has no appearance of being a lode—and the cross-cut is, therefore, continued driving. The rise in the 18 is holed to the workings in the 8 fm. level, where the ground has been explored for copper. The masonry of the smith's shop will be completed to-day. We shall sample to-day, parcels of lead ore, computed 87 tons—samples of which will be immediately forwarded to the respective purchasers.—J. Prince: June 29.

WHEAL ANDERTON.—The lode in the 60 fm. level, west of shaft, is 4 ft wide; the leader varying from 16 in. to 18 in., very good—the other part all saving work; east of shaft, in 60 fm. level, the lode is 4 ft. big, getting clear of the slide, and producing good stones of tin, and forming a regular course, with good walls—here I expect to see a rich lode ere long, judging from the present indications, which are of high promise. The back of the 60 fm. level is producing very good work for tin, indeed quite as rich as I have ever seen the lode produce. We are preparing to put in a plunger lift under the 60, to discharge the water at the 30 cistern. I have sent 4 tons of tin for shipment this morning, and am preparing a similar quantity, which we have at surface, with all possible dispatch. I have also ordered an axle to carry 12 stamp-heads more than we have, to be attached to the same wheel now working the stamps, that being of sufficient power to command it with a full stream of water.—James Carpenter: June 30.

WHEAL MARY ANN.—The 30 fm. level is driven south of Barratt's shaft shaft 8 fms.; the lode is 3 ft. wide, and worth 16*l.* per fm. The lode in the 15 fm. level south is 2½ ft. wide, composed of gossan, can, and lead, and is worth at present about 7*l.* per fm.—this level is extended south on the lode to within 7 fms. of the engine-shaft; the stopes are looking very well. We sold, on the 19th inst., 50 tons of lead ore to Messrs. Michell and Son, at 18*l.* 10*s.* per ton, and we have now at the surface 8 tons, and also 14 tons of gossan ores, and we hope to sell again in about two months. Pollard's, or the engine-shaft, is sunk 6 fms. below the adit level.—P. Clymo, jun.: June 28.

WHEAL TRELAWNEY.—The lode in the 42 fm. level, north of Phillips's shaft, is 3½ ft. wide, worth 26*l.* per fm.; the lode in the same level south is 2½ ft. wide, and worth 18*l.* per fm. The lode in the winze, under the 32 fm. level, north of Phillips's shaft, is 3 ft. wide, and worth 18*l.* per fm. The lode in the winze, under the 22 fm. level, north of Phillips's shaft, is 1½ ft. wide, worth 10*l.* per fm. All the stopes are looking very well. Phillips's shaft is sunk to the 52 fm. level, where we have commenced cutting a plat. Trelawney's shaft is sunk 11½ fms. under the 22 fm. level. At Vivian's shaft, in the 20 fm. cross-cut, we have cut two branches about 3 ft., a part of which contains lead and can, and we are rather inclined to think it is the lode split up just in that place; we are driving on the branches, and also the cross-cut further west, to prove whether there is any other lode or not. We sold, on Saturday last, 80 tons of lead ore to Messrs. Sims, Willyams, Nevill, and Co., at 14*l.* 15*s.* per ton.—P. Clymo, jun.: June 28.

FOREIGN MINES.

ALTEN MINES.—The following is the estimated produce for May:—

Mines.	No. of men.	Tons ore.	Per ct.	Tons copper.
Raipas	26	70	5½	3·85
United Mines	16	54	5	2·70
Ryper's	8	10	5	0·50
Mancur's	4	4	5	0·20
Michell's	6	9	5	0·45
Cole's	4	2½	5	0·13
Old Mine	4	7	6½	0·46
Wilson's	2	1	7	0·07
Carl Johan's	2	2	6	0·13
Powder House	2	4	5	0·20
Total	74	163½		8·68

Mining Report, from the 13th May to 3d June.

Raipas.—The improvement alluded to in my last report, has enabled us to somewhat increase the produce of this month, but the lodes, although possessing most favourable prospects, are still unsettled, and subject the returns to frequent fluctuations. Labouchere's lode again yields a good return of dredgy ore, and appears rather more settled and regular; the ground is also more favourable for excavating. The 10 fm. level on this lode is still promising; the produce consists principally of gossan and purple ores, with occasional traces of earthy cobalt; the course of the lode is now turned towards Carr's and the old workings. In the back of the shallow adit, a few fathoms north-east of Labouchere's, a small but rich vein of purple ore has been discovered; it appears to strike off to one of the small lodes, uncovered at the surface about five years ago. The necessary workings for further exploring this part of the mine have been commenced. The lode north-west of Labouchere's is also more regular and promising than for some months past. Carr's lode is also improved, and again yields large returns of ore, of better quality. A roof stope, lately commenced in the old 10 fm. level, likewise presents a very kindly appearance, but the returns as yet have been but trifling. The great quantity of ice and snow collected in shaft No. 2, still prevents our resuming the workings in this part of the mine. The snow is fast disappearing from the roads; the ice in the Alten river is broken up, and we hope to resume the usual ore delivery as soon as the mountain floods are passed away, which we expect will take place about Midsummer.

United Mines.—The improvement in Ward's stope still holds good, and at Woodhill's the tributers continue to make some profitable returns.

Ryper's.—The prospects of the new lode continue favourable; the lode is large, and contains good ore, but the great influx of water into the mine, occasioned by the melting of the snow on the mountains, greatly impedes our mining operations.

Mancur's.—We still continue to open ground with the stope in the bottom of the south sink, where the lode, although small, contains good ore, and has also a promising appearance; the ground, however, is hard, and the progress made in developing the lode is consequently very slow.

Michell's.—The shallow adit level is looking rather more promising, and some small veins of good yellow ore have again appeared in the lode. The tributers from this mine have occasionally been employed at the smelting-house, and the returns are, in consequence, less than we expected.

Cole's.—The melted snow from the side of the mountain has filled this mine with water; we are, therefore, obliged to suspend operations for a short time. We hope, however, to resume the tribute pitches by the latter end of this month.

Old Mine.—The tribute system at this mine works well; the men are now more careful in selecting and preparing the produce; and the consumption of materials, in proportion to the copper returned, is also considerably reduced. I beg to refer you to the accompanying note of tribute settings, where it will be seen that arrangements have been entered into with the tributers, who will now deliver their own ore to the smelting-house; and, we hope, thereby effect a considerable saving to the association.

Wilson's.—The great quantity of water in the mine prevents us from resuming the old workings; our present operations are, therefore, confined to the surface, where the tributers are engaged in exploring the numerous branches from the original lodes.

Carl Johan's.—It is now nearly 20 years since this part of the establishment has been worked. The lode, although small, appears to be regular and good. The workings have been resumed on tribute, and the result of this month's operations have been profitable; the prospects are also favourable. On the present system, no operations can be carried on here, without leaving a profit.

Powder House.—The operations here are also confined to tribute, but it will probably be necessary for a short time to set a tutwork bargain, to open the lode towards the north-east, where a tribute pitch may afterwards be worked with advantage.

Quarrig.—The workings have been suspended until the thaw has ceased, when we hope to resume the usual mining operations on the several lodes. Many offers have already been made by the workpeople for resuming this place on tribute.

New Lodes.—In the course of this month we hope to resume the usual exploratory workings on this branch of the establishment, at the surface.

Ore Dressing.—We put the machinery to work this day (June 2), and hope to be able to make some good returns against the end of the month. Our picking operations will also commence as soon as the days get a little warmer. The spring has been unusually backward, and the ground is still covered with snow in many places close to the water's edge. We may, however, look on this rather as a favourable omen than otherwise; inasmuch as the drought we are so frequently subject to in the summer will, in a great measure, be compensated for by the great quantity of snow still remaining on the mountains.—J. H. Thomas.

Ratpas, May 29.—I enclose you the summary of the ores broken at Ratpas in May, also the settings for June. With regard to the mine, the following is a brief outline, with the present prospects in view:—In Erie Ladberg and partners' level, in the 10 fm. workings, the lode is at present pursuing a south-eastern direction, which is chiefly composed of gossan, containing purple ores, and producing about 3 tons per fm. In Arne Olsom and partners' stope, in the 10 fm. workings, the lode is about 2 ft. wide, containing purple ores, and producing about 2½ tons per fm. In Erie Danielson and partners' side stope, in Labouchere's, the lode continues to present equally as good prospects as when I wrote last; the ground, however, is rather more favourable for driving than what it has hitherto been for some time past, which has caused a reduction in the price of this bargain of £2 per fm. In Johan Kente and partners' roof stope, in the shallow adit workings, the lode continues much the same as when last reported—viz., variable. In Johan Ponlons and partners' foot stope, west of Labouchere's, the lode has again become more settled, and is wearing at present a very kindly appearance. In Johan Petter Leuki and partners' stope, on Carr's, the lode is at present about 5 ft. big, containing purple and yellow ores, mixed together, and producing upwards of 5 tons of ores per fm. In the other parts of the mine there is nothing new worthy of arresting your attention. It is my intention this month to employ some men to explore the different small branches at the surface, which I am inclined to think will amply compensate us for our trouble.—Samuel Monk.

ASTURIAN MINING COMPANY.

The annual general meeting of shareholders was held at the offices, in Austin-friars, on Wednesday last, the 30th June, in accordance with the Deed of Settlement—S. P. Pratt, Esq., in the chair—when the Secretary (Mr. Mackenzie), having read the advertisement convening the meeting, together with the directors' report, and copy of accounts to 30th April last, the Chairman suggested, that the meeting should be adjourned to the 30th August—as, in the mean time, they would be in possession of the report of a deputation now on the mines, minutely inspecting their property, which he was convinced would be highly satisfactory to the proprietary; reports from their chairman, now on the mines, were open to the inspection of the proprietors at the office, as the directors had no wish to withhold any information they were in possession of.—Considerable discussion ensued on the subject of the right of the unregistered shareholders being present, or voting on any subject before the meeting, which, by a clause in their deed, they were excluded from attending, which ended in many influential proprietors present engaging to register their shares, previous to the proposed adjourned meeting, when the accounts were to be presented more in detail, and made up to the 31st July, in accordance with the wish expressed by a majority of the meeting, when a motion to that effect having been unanimously carried, the meeting adjourned to the 30th August next. We shall publish the report and accounts, in their amended form, after being presented at the forthcoming meeting.

SOUTHERN AND WESTERN MINING COMPANY OF IRELAND.

The directors have just announced that the charter from the Crown, for which they have so long laboured, has passed the great seal, thereby forming the company into a corporation, with power to work mines in the counties of Cork, Kerry, Limerick, and Waterford, and limiting the liability of shareholders to the amount of their shares—the directors consider this result of their labours the more important, from the Southern and Western Company being the only one in Ireland so privileged. The valuable royalties and mines of Gurtavallig, have been secured; and a call of 10s. per share now made will allow of the whole of the purchase money being paid, leaving sufficient funds in hand for their full development, and for conducting the operations of the company for a considerable period. Having taken some interest in the formation of this company, and being anxious for its success—as in all undertakings likely to promote the welfare of Ireland, through the development and successful working of her mineral resources—we append the reports entire, which have been prepared by the directors and mining agents:—

DIRECTORS' REPORT.

In laying the following report of the Gurtavallig Mine before the shareholders in the Southern and Western Mining Company of Ireland, the board of directors feel much gratification in being enabled to congratulate them upon the present position and future prospects of the company. The charter from the Crown, for which they have so long laboured, passed the great seal on the 18th of March last, thereby forming this company into a corporation, with power to work mines in the counties of Cork, Kerry, Limerick, and Waterford, and limiting the liability of the shareholders to the amount of their shares.

The directors are most desirous to point the attention of the shareholders to the fact, that this is the only mining company in Ireland, to whom the privileges of a charter have been granted; and also, to the important difference between their position, and that of companies constituted under the Joint Stock Act, by which each shareholder becomes liable to the whole amount of the claims upon such companies, and which has too often resulted in the ruin of thousands, and the abandonment of many valuable undertakings, while the shareholders in this company are protected by their charter, from all liability beyond the amount of their shares. The directors would also remind the shareholders, that this company is not limited to one or any number of mines, and that it is their intention, when advisable, to extend their operations to the four counties named in the charter, and which, combined with their present works, and conducted with the same careful attention and economical management which has been hitherto exercised, they trust will render a large profit to the shareholders. In conclusion, the directors would merely add, that while the monetary pressure of the times has effected, and in many instances seriously depreciated, the value of railway projects, and other undertakings of that character, the shares of this company have always maintained a premium, and which they can only ascribe to the soundness of the undertaking in itself, conjoined with public confidence in the respectability of the shareholders, and the limited liability of the company.

MINE AGENTS' REPORT.

To Major North Ludlow Beamish, chairman of the Southern and Western Mining Company of Ireland.

Sir,—In handing you the first report of the Gurtavallig Mine, I beg respectfully to direct your attention and consideration to—1. The extent of the sett.—2. The situation of the mine.—3. The quantity of work performed; and 4. The prospects of the mine and plan of future operations.

1. The sett, which is about 3 miles in length (on the run or course of the lodes), and 2 miles in breadth, is situated in the parish of Kilcrohane, west division of West Carberry, and county of Cork; and held by lease for 32 years, at a royalty of 1-18th for the first 6 years, and 1-16th for the remaining 26 years), under J. Congreve, Esq., of Mount Congreve, County Waterford. It contains at least 10 large lodes, all of which are seen in the cliffs, from which they run inland, and in many places, intersecting and forming junctions with each other. The strata, which consists principally of clay-slate (or killas), and green stone, traversed by quartz, and porphyritic formation, are allowed by all practical miners and geologists, to abound most in mineral and metalliferous deposits.

2. The mine or lodes on which operations have been commenced, is situated on the south shore of Bantry Bay, about 1½ mile north-east of the promontory called Sheeps-head, which divides the harbours of Dunmanus and Bantry, and is opposite Bere Island, and the celebrated mines of Berehaven.

3. The cliff in which we commenced operations, is about 40 fms. high from high water mark; several lodes intersect each other in this spot, and the action of the sea having washed out the soft part of the lodes, the whole of the cliff from top to bottom was completely crushed. Our first work, therefore, was to clear away all the loose rocks, thousands of tons of which we rolled into the sea, and with the remainder built two strong and substantial quays, one 73 ft. long, and 40 ft. high, the other 92 ft. long, and 36 ft. high. We have also filled up, and made a complete and convenient dressing-floor (at the base of the cliff), 180 ft. long, and 50 ft. wide; it is well sheltered from every wind, and as the stuff is brought out of the deep adit on the railway, it is tipped immediately on the spot where it is prepared for market. To judge however, of the difficulties with which we had to contend, and to form a correct estimate of the work performed, the place should have been seen as it was, as well as it now is. We have in fact set bounds to the Atlantic waves for though they lash and foam sometimes outside (over craggy rocks), our works have withstood the furious storms of two severe winters. A complete wilderness and barren cliff, which had been for past ages the undisturbed resort of the eagle, the hawk, and wild sea bird, has, by our labours for the past 16 months, been changed into a valley of active industry, giving reproductive employment, food, and comfort, to numbers of the hitherto starving, but peaceable, inhabitants of one of the wildest districts in the United Kingdom; for you can now hear, on our well secured dressing-floors (mingled with the roar of the Atlantic), the busy voices of men, women, boys, and girls, all engaged in breaking, dressing, and preparing the ore for market. About the latter end of August we first commenced to clear away the rocky cliff, winter soon overtook us, and with it came short, wet, and stormy days—the work consequently progressed rather slowly until the spring of 1846. The lodes having a south underlay or dip, and the cliff sloping gradually from south to north, we had to begin a cross-cut south at the base of the cliff, for the purpose of intersecting the lodes—it was commenced in January, and the lode intersected in October. We have in the course of 16 months, with an average number of 24 miners, whose earnings or gettings in the aggregate, ranged from 9s. to 12s. a week, explored of 10d. and 1s. per day—making a total of 50 men, who (with their families, amounting at the lowest calculation to 200 souls) have thus been afforded the means of earning a livelihood, while their neighbours have perished by thousands from want of food, or the means of purchasing it. In the shallow adit cast, we have driven through a good length of orey ground, and when we have communicated with Beamish's shaft, we shall be enabled to stope the ground to a great advantage. The east and west lode is intersected by an oblique or caunter lode, which we intend to cross-cut; we also intend to cross-cut north, in order to intersect the great caunter lode, and some branches gone off in that direction. We shall thus intersect and lay open (besides ascertaining their value), three champion lodes, within a distance of 10 fms., by the time the deep adit reaches this point of our operations. Beamish's shaft is sunk on the north part of the great caunter lode, and we shall have to cross-cut about 3 fms. south from the east and west lode to effect a communication; after which we shall push the level east on the course of the east and west lode, and also south-east on the great caunter lode, towards Congreve's shaft, in which the lode is about 10 ft. wide, and composed of gossan, mundic, blende, quarts, and strong yellow ore. When the shallow adit reaches Gongreve's shaft, we expect from the porous nature of the lode, it will drain the ground, and enable us to sink the shaft to the level, without any cost of water charge. The east and west lode varies in breadth, from 2 to 6 ft.—it is regular and well defined, and composed of beautiful gossan, soft decomposed quarts, yellow ore, and black oxide of copper—the gossan I am persuaded contains silver, but I have had no time as yet to test it. In the deep adit cast we have hitherto driven, and shall continue to do so (until we communicate with Townsend's winze), on the soft or Saxkan part of the lode. Our reason for pursuing this course is, that the ground about the cliff, alluded to in the commencement of this report, is unsettled, and contains no ore, though affording great facilities for driving. Immediately east, however, of Townsend's winze, we leave the unsettled ground, and meet the ore ground; we are rapidly progressing towards this point, in the deep adit level, and shall reach it, I expect, in the course of another month. Townsend's winze, I should have remarked, for the same reason, is sunk from the shallow to the deep adit on the flookan part of the lode also. In the shallow adit west, the lode, "or rather the part on which the end is being driven," is about 3½ ft. wide, and contains (though only 7 fms. under surface), strong yellow ore, carbonate of copper, soft friable quarts, gossan, and mundic. We are satisfied however, that we have not yet seen the south or north wall of the lode—and as soon as our new surface shaft is holed to the level, we shall cross-cut the lode, as well as other lodes which we have ascertained are within a short distance. We have just commenced sinking a winze on the course of the lode, from the shallow to the deep adit level, in which the lode is large, strong, and orey. In the deep adit west, we have a fine lode, composed of yellow ore, quarts, mundic, chrystallised and ruby ore, but not having ascertained its breadth, we are cross-cutting south for that purpose. I have thus, as briefly as possible, laid before you a statement of our proceedings and prospects up to the end of April.

4. With regard to the future prospects of the mine.—From the nature, position, number of lodes, and the great natural facilities and advantages which exist for their further exploration and development, I am confident our deep adit will drain the mine (all in virgin ground), between 60 and 70 fms. deep, with no other cost or charge, except sinking winzes, and driving the level; and as we are yet completely in our infancy, by a rigid adherence to the plan pursued from the commencement—viz.: the strictest economy in our expenditure, in every department connected with the concern—it will not only enrich the whole population of the peninsula of Meintervarra, but add considerably to the wealth of every individual connected with it; for though it is only 16 months since the first blast was fired in our deep adit cross-cut (the driving of which took 9 months before we intersected the lode), I consider from the quantity of ore already at surface, with what we have discovered in the mine, leaving future discoveries out of the question, that it will meet the cost of all our underground operations; and when it is taken into consideration, that we have only stoped 9 fms. 2 ft. of ground, out of 179 fms. 4 ft. 8 in., which we have explored in various directions, it must be evident to the most casual observer, that we did not pick out the eyes of the mine as we went along—a system too often pursued in mining, and invariably attended with fatal results to all concerned. Having resided in this locality about seven years, and devoted the whole of my time to the development of its mineral resources, I may perhaps, in conclusion, be allowed to give an opinion as to its general character, capabilities, &c., as a mining district; and without entering into specific details, which would necessarily occupy too much time and space in this report, I hesitate not to say, that if the mineral districts of West Carberry were explored with common prudence, and a little perseverance, a comparatively small amount of capital would be sufficient for the purpose; they would afford ample and remunerative employment for six times the present amount of surplus population, and create a lasting source of wealth to those engaged in their development. I am confident that the most scientific and practical miner in England, would pronounce a similar opinion; and I therefore fearlessly, but respectfully, solicit and court inspection, by scientific and practical miners, not only of Gurtavallig Mine, but the whole district to which I have alluded.—William Thomas, Superintendent of the Mine; James Bennett, Resident Mining Captain.

BOLANOS MINING COMPANY.

In the *Mining Journal* of the 19th June, we reported the proceedings at the annual meeting of shareholders, held on the Thursday previous; we have since received copies of the directors' report, &c., presented thereat, which we now append:—

REPORT.

The period has now arrived, for the directors to report to the proprietary on the proceedings connected with the company's interests, since the last annual meeting. With the general result of the past year the directors are well satisfied, and the prospects for the future they cannot but deem highly encouraging—a feeling in which they trust the shareholders at large will participate. Referring to their report issued in March last, the directors have now to state that the mines of San Clemente, San Nicolas, and Malanoche, were delivered to their respective owners at the end of January, agreeably with the intimation conveyed in the March report. The terms of the delivery recognise the company's claim to a share in the buildings and stock of refuse ores; of these latter, there exists a large quantity belonging to San Clemente, which will, it is said, produce small profits for a considerable time to come—the stock belonging to San Nicolas is of comparatively trifling extent. The only mines now in possession of the company are, consequently,

San Francisco de Paula and Loreto.—The former of these has continued to afford from time to time most flattering promises—but the ores in the upper levels having been found only in bunches, the quantity has not been sufficient to cover the costs. All appearances, however, are said to justify the conclusion, that at a greater depth the lodes will assume a more regular character; the completion of the deep cross-cut is therefore a work of much interest—and, should the lodes be found as productive at this depth as is expected, profits ought to be immediately realised. The prospects of the mine of Loreto, adjoining San Francisco to the east, depend in a great degree upon the issue of the trials in the latter, those points being at no great distance from the boundary line of the two setts. Some of the upper workings from San Francisco have already extended within the Loreto boundary, but without leading to discovery.

La Celestina.—In this mine no material improvement has taken place since the last report in March; it has, however, continued to produce, in small quantities, ores of excellent quality—and the profits realised therefrom, during the last five months, have extinguished a large proportion of its debt; notwithstanding, therefore, that the mine has somewhat declined from its earlier promise, there is sufficient inducement to continue the trials, especially as it is worked at a very moderate cost.

El Bote.—In the March report of the directors, a full explanation was given of all that had occurred up to that date, in reference to this, the most important of the company's mining adventurers; and they now consider themselves warranted, by the experience since gained, in confirming to the full extent all that has been already said, with reference to the high promise which this mine affords. In the three months which have since elapsed, the extraction has been more than maintained; the average weekly raising for the six months, ending December, as stated in the last report, was 1620 cargas; while, for the first three months of the present year, it has averaged within a fraction of 3000 cargas, and in April reached 3000 cargas per week. The quantity reduced, however, has hitherto by no means kept pace with the extraction (but for the future it is expected to do so), and a large accumulation of ore on the surface is the consequence. For the same reason, the actual profit realised has been of no great amount; but, taking the net proceeds of the ores on hand, at the valuation put upon them in Mexico, the profit for the eight months may not unreasonably be estimated at $70,000. This profit may not appear large on such an extraction, but these remarks are mainly intended to show that the reputation which the lodes of this district have acquired for great productiveness, has been fully maintained in the case of this, the only one yet explored; and it is worthy of remark, that from veins of this class the greatest *bonanzas*, with few exceptions, have been obtained. The comparatively insignificant depth of the present workings is also to be considered; and as it has been seen that, from the depth at which the ores were found, to be of a quality worth extracting down to the level of the water, an uniform and steady improvement has taken place, the fair conclusion is that, as greater depth is attained, the ores will be found to be of still better quality. The main object has, therefore, been to sink the shaft for the purpose of driving another cross-cut to the lode; owing to the hardness of the ground, and a considerable weight of water, the progress has been slow—but at the date of the last advices, the shaft had reached a point of 30 varas below the upper cross-cut, from whence another would be immediately commenced, which, when completed, will effectually drain all the upper workings, and thereby afford access to a large extent of ore ground already passed through in the level above. It can hardly be doubted that the extraction will then greatly increase; and, as before observed, there being equal reason to rely on an improvement in quality also, considerably augmented profits may with good reason be looked for. With the object of assisting in the drainage, as well as of facilitating the opening of the ground, a new shaft, called San Genaro, has been commenced about 170 varas east of that of San Fernando; it is already sunk 80 varas, and wants about 20 varas more to reach the level of the water. On this shaft it is intended to place a steam-engine, and preparations are already in progress for removing thither one of those at Bolanos. Since the date of the March report, nothing of consequence has been done in the way of trials on any of the other promising veins comprised in these setts. The directors, therefore, beg to refer the shareholders to what was then said with reference thereto; they trust that the time is not far distant when they may be in possession of adequate funds for making trials of some of them—but, in the first instance, their object will be (and they feel assured that such is the desire on the part of their manager in Mexico), to accumulate a fund for reimbursing what has been already advanced for stores and other necessaries. At the end of March, the company's advances under this head, amounted to $169,000, which has been supplied partly from the proceeds of bills drawn on the directors, and the remainder from their resources in Mexico; and, as they cannot doubt but that the mine will henceforward leave steady profits, a speedy reimbursement of this advance may be expected. Having thus taken a general review of all that appears to the directors to require comment with reference to this concern, they cannot conclude without again congratulating the shareholders on the acquisition of what they must consider a most valuable sett of mines, and which, by the common consent of all parties on the spot, promises to become, at no distant date, both largely and permanently profitable.

Referring to what has been already said under the head of El Bote, respecting the removal of a steam-engine from Bolanos, the directors have further to report that it has been determined to transport the two engines together, in consideration of the economy of availing of the same resources for both; and, as the remaining stock will be comparatively small, it is also proposed to proceed with the removal of everything, so that the Bolanos establishment and its stock account may be finally closed. During the past year a sale has been made of the small 22-inch cylinder engine, formerly used at Santa Fé Mine, at the price of $10,000, payable in mules and horses, the principal part of which has been received. It is with regret that the directors announce to the shareholders that the company will no longer have the benefit of the services of Mr. Penny; and it is but due to him to state that, during the whole time that he has been engaged in the company's service, he has always evidenced an earnest desire to promote and secure the company's interests. The gentleman selected by him to direct their affairs generally, in his place, is Mr. Birkbeck; and, from their long knowledge of Mr. Birkbeck's character and abilities, the directors believe that a better choice of a successor could not have been made. Mr. Place will superintend the negociation of El Bote, and this appointment is equally satisfactory to the directors, inasmuch as he has had the management of the mine from the first (excepting only during the period from August last to February); and his zeal and activity are well known.

For the particulars of the costs and returns of the mine, and of the receipts and disbursements of the company, both here and in Mexico, during the past year, the directors beg to refer the shareholders to the several annexed accounts; and for their further information they subjoin an abstract of the accounts of the San Clemente district at the end of March last, showing a working capital at that date, exclusive of the Bolanos stock, of $133,431 2½ rs.

Cash and good debts	$32,485 0½ rs.	
Hacienda stores	22,963 5½	
General stores and cattle	30,916 1½	
Estimated net value of ores on hand	14,087 7½	— $100,453 5½ rs.
Deduct, outstanding liabilities		34,613 4½
		$65,839 4½ rs.
Add, El Bote Mine, amount of supplies to that concern		45,129 1½
Inventories of stock and moveables		21,512 4½
		$132,481 2½ rs.

The following is also an abstract of the accounts of El Bote Mine at the same date:—

Assets—Cash and silver ore on hand	$55,938 1½ rs.	
17,490 cargas of ore; net value	say 60,000 0	
Hacienda of Cinco Senores purchase-money, repairs, &c.	37,210 3½	
Stores and cattle account	79,935 7	
	$233,084 4½	
Liabilities—Due to sundry persons for advances, stores, &c.	71,841 4½	
Due to Bolanos Mining Company for supplies from San Clemente district, as above	45,129 1½	
Due for ditto from England	64,604 7½	
	$181,575 6½	

Gwinear Consols.—A meeting of adventurers was held at the Lanyon Arms, on Friday, the 25th day of June, when it was resolved—That, in consequence of the purser (Mr. William Lanyon) having neglected to pay the labourers for May month, and refusing to act as purser, the decision of this meeting is, that his services be dispensed with forthwith; and that Mr. R. R. Michell, of Marazion, be appointed in his place;—That, during the absence of Mr. Michell, Capt. N. Tredinnick transact the purser's business, and that he pay the men their wages for May month to-morrow, and that Mr. Michell be instructed to repay the same;—That, in consequence of the balance in hand, at the meeting held 22d March last, being expended, a call of 1*l.* per share be made;—That, as this meeting was convened during Mr. Michell's absence, it is deemed advisable to call another, to be held on Monday, the 5th July, to audit the late purser's accounts, and determine upon the course of operations in future.—The following reports, dated June 26, were presented:—Driving east, on Haywood's lode, is still poor; driving west, on ditto, we have a very pleasing discovery, perhaps as good as has been witnessed in this neighbourhood for a long time, we have driven on it more than 6 ft., and more than 10 ft. wide, composed of black and yellow ore—what the extent of it may be remains to be proved, but this is the present state of the lode; driving east, on Tredinnick's lode, is still unproductive, but has a favourable appearance.—Hugh Stephens.—We have discovered ore west on Haywood's lode, which yesterday, when I saw it, was opened upon 2 ft. in length and 6 ft. in width; I find to-day, however, upon going there to pay the men, that it is now opened upon 6 ft. in length, and is 10 ft. wide, and the captain informs me that the end is worth 200*l.* per fm. The amount of May pay is 66*l.* 14s. 11d.—T. Tredinnick.

South Devon Consols.—A meeting of adventurers in this mine was held on Wednesday last, the 30th June, at the Globe Hotel, Plymouth.—The report of Capt. Vivian, with the accounts, were laid upon the table.—Capt. Choake (the agent of the mine) stated, that they had not succeeded in taking the lode as was expected—they had passed through a string, or lode, but he considered it was still further south; however, he should say, that if the lode be not met with in the course of a few fathoms further driving, he would not recommend further operations in search of it; inasmuch, that a considerable extent of ground had been driven, and, allowing for its underlay, which was 4 to 5 ft. in a fm., it should, by his calculation, have been intersected long since. In reply to a question as to the amount of liabilities, Mr. Edey (the purser) stated, that they might be set down at about 400*l.*, against which was to be taken the value of the materials, &c., on the mine, supposing it to be abandoned. A notice from Capt. J. Carpenter, of his relinquishment of his interest in the mine, undertaking to pay his proportion of all debts and liabilities, and receiving on the other hand his like proportion of the value of materials &c., was read and accepted, and such relinquishment ordered to be entered on the minutes. No business of any moment being before the meeting, it was accordingly adjourned for a fortnight; Capt. Choake, in the meantime, being instructed to continue the present cross-cut, in the expectation of meeting with the lode.

Trewollack.—A meeting of adventurers was held at the mine, on Monday, June 21. The statement of acccounts presented, showing a balance of 246*l.* 19s. due to the purser, having been examined, were allowed, and a call of 3*l.* per share made, to liquidate all the debts, and for the further prosecution of the mine. The following report, from Capt. John Lean, was read to the meeting:—"The 30 fm. level, north of the engine-shaft, is set to four men, at 50s. per fm.—lode 4 ft. wide; the eastern part, 2½ ft wide, is composed of spar, and some stones of lead; the western part is flookan, prian, and mundic. In the 30 fm. level south, four men, at 40s. per fm.—lode 3½ ft. wide, composed of spar and flookan, with good stones of lead. There is one thing I beg to notice, and that is, the soft and clear appearance of the spar to what it was in the 20 fm. level, over the present 30 fm. level south. Four men rising in the back of the 30 fm. level south, at 40s. per fm.—lode 4 ft. wide, with rich stones of lead; this rise will ventilate this part of the mine, as also the ground between the two levels; and will enable us to extend the 30 fm. level south to Edward's shaft, without any air machine, or any other rise. In the 20 fm. level south, the lode is 6 ft. wide; the eastern part is composed of a fine soft white prian, with some flookan—lode 3 ft. wide; the western part is of soft flookan, with lead and mundic, and good stones of rich yellow copper ore; the lode here is of a very promising character. One remark I would make in reference to this level—on the western wall there is soft flookan, with lead, but in the adit, on the same side, there was hard capel. In the adit end, south of the south shaft, four men at 30s. per fm.—lode 4 ft. wide, principally of flookan, with fine particles of lead scattered through it, giving out a large stream of water. By the foregoing, you perceive we have not great riches to speak of; but I may be allowed to say, on no former occasion have I seen the mine present so favourable an appearance; and from the length of ground opened on the lode, with its width and general character, I am persuaded there are large deposits of lead in the sett."

Wheal Blencowe.—A meeting of adventurers was held at the mine, on Thursday, June 24—Mr. Wm. Pease in the chair—the following statement of accounts were presented:—To balance due to purser at last meeting of adventurers, 926*l.* 2s. 5d.; to cost for March, 164*l.* 10s. 11d.; April, 190*l.* 17s.; May, 213*l.* 7s. 1d.; to merchants' bills, 184*l.* 16s. 5d.; lord's dues, 21*l.* 16s. 1d. —1704*l.* 9s. 11d. By call made on the 13th of April, 925*l.* 13s.—less arrears, 156*l.* 18s. 3d.—768*l.* 14s. 9d.; tin sold, April 3, 110s. 1s. 9d.; ditto, June 4, 217*l.* 0s. 7d.; carriage of tin, 3*l.* 12s. 10d.; balance due to purser, 605*l.*—1704*l.* 9s. 11d. The accounts having been examined, were allowed, and a call of 2*l.* 10s. per share made, to pay off the balance due to the purser. It was resolved, that all adventurers in arrear with the payment of their cost, be immediately written to, demanding payment; and in case of their not paying it within 14 days, the purser be, and he is hereby, authorised and instructed to take legal proceedings against them. The following report, from Capts. John Dale and E. Nicholas, was read to the meeting:—"We have now employed in this mine about 70 persons, of whom 40 are working underground, and of these only 10 are working on tin ground; the remaining 30 are engaged in sinking a sump, driving ends, and in developing the lode; hence the reason why the expenditure exceeds the value of the tin returned. We are now down with the sump to the 30 fm. level, and shall immediately commence driving to cut the lode, which we hope to have done within a month from this time. We are also down with the shaft about 20 fms. north of the present end of the 10 fm. level, to a depth of 9 fms. from the surface; and our object is to open a communication as speedily as possible between the two, in order to afford proper ventilation to the mine. We opened on the lode in the 10 fm. level about 11 fms. in length, the lode averaging about 4 ft. wide, and is in every respect a good lode. The back of this lode we have not stoped; because when the communication shall have been opened between this level and the shaft last spoken of, and the ventilation perfected, we shall be able to break the tin ground at about two-thirds of the expense that it could be done for at present. However, therefore, some of the adventurers may be disappointed at finding the expenditure to exceed to such an extent the returns of tin, they must remember that they will hereafter be doubly paid for the present extra outlay; and that any other mode of working—however such other mode may be wished for by the mere speculator—would be, in the end, attended with ruinous consequences to the adventurers. About 4 fms. south of the present end, we intersected a lode or branch, which is about 2 ft. wide, and contains excellent work; but this, as well as the backs, we are for the present precluded from working on, owing to the present imperfect ventilation. We have an east and west lode, near the north shaft, which lode we intend very soon to open on, and we have reason to hope it will not be found an unproductive one. We do not hesitate to say that the prospects of the mine were never more cheering than at the present time; but in order to work the mine properly, with a view to an ultimate profitable return, a further expenditure must be made; and, in making the announcement, we beg to state most distinctly, that there is no concern which we are acquainted with, that is more worthy of it, or that is more likely eventually to repay the shareholders."

Wheal Calstock.—A general meeting of the adventurers in this mine was held in Plymouth, on the 24th June, when specimens from the lode were produced, and, from its genial character, and fair promise of ultimate success at no distant date, gave very general satisfaction.—After the usual routine of business was gone through, the following report from Capt. W. B. Collom was read:—The lode we are driving on in the 30 fm. level west has considerably improved within the last 6 ft., the lode altogether is about 3½ ft. big—the leader part, which is making on the north side, being about 15 in. wide, and composed of rich yellow ore, fluor-spar, and mundic, with a small portion of white iron and prian; the south part of the lode is carrying a branch of lead ore, blende, mundic, and fluor-spar, forming as promising a looking lode as can be seen, and far superior to anything we have yet discovered. I am induced to augur most favourably of this improvement, from the fact of so many lodes forming a junction to the west of the cross-course, strengthening, as it does, the opinion entertained, that when we approach that point, rich deposits of ore will be found. The 30 fm. level has been driven west of Pawley's shaft 71 fathoms—making its length in all 131 fms. When we commenced sinking Pawley's shaft in June last, we expected, from reports given us by different miners who had worked in the neighbourhood, to have found the cross-course at least 80 fms. nearer that shaft than it was afterwards discovered to be—consequently, increasing the length of time before this part of the lode could be explored, and where it might be fairly expected to be productive of ore. A cross-cut has been driven south near the shaft a distance of 18 fathoms, and intersected the Danescombe lode; at this place it was found to be small, being split into branches; the ground the whole of that distance was full of branches of ore, apparently thrown off from that lode—and which lode, from the dialling, will form a junction with the gossan one about 15 fms. farther west than our present end. The principle amount of work done since we commenced, has been to sink Pawley's shaft 26 fms. on the course of the gossan lode; the shaft in the Orchard 7 fms. on the course of one of the north lodes; clearing and timbering the adit level a distance of 40 fms.; cutting and timbering plat at the 30 fm. level, driving the 30 fm. level west of the shaft 71 fms.; driving cross-cut south to cut Danescombe lode 18 fathoms; driving cross-cut north 5 fms.; sinking 150 fms. of ground in different parts of the sett to cut the several lodes; building and furnishing Smith's shop, and making and erecting the whim.

The amount of money spent from the commencement to the end of April, 1847, including a period of 17 months, is 600*l.* 10s. 6d., with liabilities amounting to 147*l.* 18s. 4d.—making in all 748*l.* 8s. 10d.; out of which sum 90*l.* of it is for timber. Before concluding, I beg again to repeat, that I consider Wheal Call-stock one of the best speculations now working.

FOWEY CONSOLS.—A meeting of adventurers in these mines was lately held, at which the statement of expenditure and receipts for Jan., Feb., March, and April, was submitted, and of which the following is an abstract:—By balance at last account, 8182*l.* 8s. 4d.; ores sold, 14,489*l.* 18s. 7d. = 22,672*l.* 6s. 11d.—To costs, &c., 14,636*l.* 13s. 9d.: balance now due to adventurers, 8,035*l.* 13s. 2d.

GOONVREA.—A meeting of adventurers was held, on the 22d June, when the following accounts were submitted, and a call of 1*l.* per share made:—Balance from last account, 46*l.* 18s. 6d.; March, April, and May cost, 121*l.* 19s. 8d.—168*l.* 18s. 2d.—By arrears of calls, and call of 1*l.*, 120*l.*—balance, 48*l.* 18s. 2d.

GREAT CALLESTICK MOORS.—At a meeting of adventurers held at Truro, on Monday last, the accounts for April and May months were allowed as follows, and a call of 3*l.* per share ordered:—To balance at last account, 469*l.* 3s. 4d.; cost and merchants' bills, 820*l.* 8s.=1289*l.* 11s. 4d.—By arrears on former calls received, 28*l.* 12s. 6d.; call of 2*l.* per share (less 32*l.* arrears), 480*l.*; ores sold (less dues) 222*l.* 7s. 6d.=731*l.*: leaving balance of 558*l.* 11s. 4d.

NORTH POOL.—A meeting of adventurers was held at the mine, on Tuesday last, when the following accounts were passed:—To balance from last account, 523*l.* 12s. 1d.; cost for March and April, 1031*l.* 12s. 6d. = 1555*l.* 4s. 7d.—By ores sold (less dues), 1143*l.* 1s. 2d.: leaving balance against adventurers, 412*l.* 3s. 5d. To meet this balance, and the next two months' costs, ores have been sold in June amounting to upwards of 1600*l.*

WHEAL FRANCO.—A general meeting of adventurers was held at the mine, on Wednesday, June 23.—W. H. EVENS, Esq., in the chair.—The report having been read, the vacancies in the committee were filled up by Messrs. W. H. Evens, S. Treeby, and J. Algar. It was resolved—That, in the absence of nearly all the committee from home, the accounts as made up by the purser, showing a balance in favour of the company, to the end of April, of 297*l.* 1s. 6d., be passed, subject to the examination of the committee, previous to the outstanding debts being paid;—that in consideration of the balance in favour of the company of 297*l.* 1s. 6d., and the anticipated receipt the latter end of this month, of over 900*l.*, for ore raised in April, and sampled 31st May, that a dividend of 1*l.* per share be now made, payable the 15th July;—that the committee be requested to examine the accounts, and have a statement of the same printed, together with a copy of the report, and the proceedings of this meeting.—The following is the report, from Capts. R. Edwards and J. Lean, read to the meeting:—"The engine-shaft has been sunk 6 fms. below the 47 fm. level; the ground is moderate for sinking, and we expect it will be down to the 62 fm. level in about four months from this time. The 47 fm. level cross-cut has been driven towards the lode about 28 fms.; the ground here is not so well for driving as it has been, and if the lode is as far off as we expect, and the ground continue as it now is, it will be two months, from this time, before the lode will be intersected. We here beg to call your attention to the fact of the lode being poor in the 32 fm. level, above the point where the 47 fm. cross-cut will intersect it, therefore we do not expect it will be rich where first cut into, but that we shall have to drive several fathoms east before we get under the run of ore ground. The 32 fm. level, east of Spry's shaft, has been driven through the cross-course, and the lode discovered on the opposite side; the end is now approaching the main part of the lode; it contains a little ore, with a promising appearance. The winze in the bottom of the 20 fm. level is down about 9½ fms., which leaves about 1½ fm. to sink to the 32 fm. level; this winze has lately passed through the same cross-course seen in the 32 fm. level; but that level not being home, and having some water, it is suspended for a short time. The middle level, west of Burnell's shaft, has been driven about 10 fms. through a large orey lode; the end is still producing tolerable good work. The middle level, west from Vosper's shaft, has been driven to the great cross-course, through an orey lode; this level has also been driven east from Vosper's shaft about 10 fms., the first 7 fms. of which was poor, but there is an orey lode now in the end. The pitches, on the whole, are looking much as they have been for some months past, and we, therefore expect there will not be much alteration in the returns."—Abstract of accounts for March and April: For ores sold, 1691*l.* 5s. 10d.—less, lord's dues, 77*l.* 18s. 7d.=1613*l.* 7s. 3d.—March labour cost, 461*l.* 17s.; April ditto, 561*l.* 19s. 7d.; merchants' bills, 166*l.* 0s. 5d.—Leaving balance of profit, 423*l.* 10s. 3d.

LIABILITIES OF ADVENTURERS IN MINES.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—Suppose a mine adventure exists in which (say) an engine is to be erected, a contract is effected for it by one of the adventurers for a certain sum, the engine is paid for by the adventurers to the contractor, for which he gives a receipt in full of all demands; the parties—say, labourers and merchants—are not paid by the contractor for materials and labour supplied him for the completion of his work—can those persons (adventurers or not) thus supplying, call on and compel any of the other adventurers, or the purser of the mine, as the representative of the said adventurers, for payment of the said supplies; or on the contractor, who alone gave his order to the said merchants and labourers on it, and got a supply of the said materials and labour for completing the said contract? The contractor states, that all materials and labour supplied, were in his name from the aforesaid merchants and labourers. An answer to this question from any of your correspondents, in your next Journal, will much oblige—THOMAS JOHNS: *Breage, June 28.*

NORTH WALES COPPER, LEAD, AND GOLD MINING COMPANY.

SIR,—It was with some surprise, that on perusing your valuable Journal of last week, I found my name associated with the North Wales Copper, Silver, Lead, and Gold Mining Company, and calling upon me to uphold certain representations put forth, bearing upon the value of the mineral property possessed by them. It is only necessary for me to state, that I am in no way connected with the company in question, and, therefore, cannot be expected to interfere one way or other, except where professionally called upon to offer an opinion on the workings, or prospects, of any particular mine. It was in such capacity I made my report on the mines possessed by this company for some private friends, irrespective of the directors, or parties, immediately concerned with the company, by whom, I presume, a copy was forwarded for insertion in your columns. This is a matter over which I could have no control; and as I never yet made a report, I was not fully prepared to maintain and to establish the data on which it was founded; I could have no objection to publicity, although the report was made without any such course being contemplated. I have only to express my regret, that my name should be in any way mixed up with the affairs of the company, except so far as applies to the report given; while I can assure you, and your correspondents, that it would have afforded me far greater pleasure, could I have reported more favourably; but I was bound to state the opinion I honestly entertained, and the result of my observation, however much such might be calculated to prejudice that company. Apologising for thus intruding on your columns, but which I deem due to my own character, as also to set your readers right, I now take leave of the subject, regretting I should be called upon again to revert to the mines, or to the company in question.—ABSALOM FRANCIS: *London, July 2.*

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

GREAT HEWAS CONSOLS.—These mines, which consist of Great Hewas, Wheals Prosper, Husband, and Elizabeth, in the parishes St. Ewe, St. Stephens, St. Creed, and St. Mawen, have been resumed, and preparations are being made for working them effectually. From the reports of those who last worked there, at the time of her suspension in 1822, and also those of the most experienced mining agents, there appears but little doubt of these mines again taking their former position in the Ticketing Papers of the county. It appears that the mines were suspended, in consequence of the misdirection of the London management—the directors, at the very period of great returns, caused the stoppage of the engine-shaft, and other shafts, the extension of levels and cross-cuts, and all tribute pitches that were above 7*s.* in the 1*l.*, thus driving from the mine those very men who frequently prove themselves the salvation of an adventurer. We find, from the sampling-book of the late company, that from Oct., 1815, to Sept., 1819, nearly 107,000*l.* worth of tin was sold, and this astonishing quantity was raised under the sum of 6*s.* in the 1*l.*; added to the above, the tin raised to the end of the year, 1822, would form an aggregate sum of 175,000*l.* We published the report of Capt. J. Davies in our last week's number, from which we may readily gather the most pleasing encouragement for the present adventurers, who, we trust, will be amply rewarded for their enterprising conduct.

SOUTH LYDFORD.—A promising lode, containing stones of copper and lead, has just been cut at this mine.—June 29.

WHEAL SAMSON.—About 4 cwts. of ore, &c., is about being sent from this mine to London, for the purpose of being carefully analyzed. I am not altogether acquainted with the properties of this lode, neither can I say that the strata is congenial for copper or tin, although they can break stones of copper from 30 to 40 lbs. in a stone. The set is about six miles west from the granite hills of St. Breward. Although at such a distance from granite, yet they can break stones of bright yellow copper, and large scales of mica, felspar, and barytes. I have been in many mines, and seen many lodes, but I have seldom seen anything like this.

WEST DOWNS CONSOLIDATED MINES.—A rich lode of tin has been discovered in this mine; the lode is upwards of 2 ft. wide, 1 ft. of which is most excellent work indeed, and the other part of the lode good work; from its strength and regularity, it bids fair to be one of the best things yet discovered in this county. It is a most extensive sett, comprising all the commons called West Downs, bounded on the south-east by the river Walkhem, and on the west by the river Tavey; from these rivers an extensive supply of water can be got to work machinery to put the mine to any depth.

GWINEAR CONSOLS.—The advices received from this mine, under date July 2, are of the most satisfactory character—representing the end west continuing as good as ever; upwards of 30 tons of ore are broken of a superior quality, and brought to surface; and, taking into account the position of this mine, and the great size of the lode, we look upon the discovery made as of the highest importance. Four shares were sold in Cornwall, on Wednesday last, at 60*l.* per share, whilst in London they could be purchased at 25*l.*

DARTMOOR CONSOLS TIN MINING COMPANY.

The secretary of this company having issued a circular to the shareholders, containing the reports recently received from their agents, Capts. J. Spargo and T. Gregory, in which they propose working this extensive sett in a manner preferable to that pursued by the former adventurers, we are induced to publish these reports for general information, because we believe the Forest of Dartmoor will ultimately prove a great mining district, and from the fact that this vast extent of Duchy property has been but little tried or examined for its mineral productions. Few, indeed, have been the attempts to bring this important property into a source of profitable investment; but the trials which have hitherto been made, however inefficient, were not without some gratifying results. The Corporation of London, we learn, has recently sent a deputation to the Moor, who have inspected Dartmoor Prison and its immediate locality, but the direct object in view we are not prepared to state; but mining being our theme, we look forward with some degree of anxiety, and proudly hope that our anticipations will be soon realised, by the discovery of some rich and standing mines, as the result of the trials which are now being made on some of the innumerable lodes that have been streamed by the ancient tinners of Dartmoor. The following are the reports before referred to:—

Dartmoor Consols Tin Mines, June 24.—I beg to inform you, we are making very satisfactory progress with clearing Two Brothers' adit. During the past week, we have been engaged putting in necessary timber, a few fathoms west of Henry's shaft, which we are happy to say we have completed, and we find many fathoms further east to be in very good repair—consequently, we shall get east of Henry's shaft faster than we anticipated a few weeks ago. We have now plenty of timber on the mine, and are making every preparation to get on with our surface machinery. During the past week, we have had two men constantly engaged in hauling some tolerable good tinstuff and rubbish at Henry's shaft. We hope you will delay no time in giving us orders to put stamps up, also our other machinery; as we are getting on so well with clearing the adits, &c., we shall soon be in readiness for them. As the weather is very fine, we are casting turf for stock, and which we hope will soon be completed. We find, during this fine weather, the water to be nearly all gone down at Pryse Deacon's shaft, which gives us every reason to suppose the eastern part of the mine to be in tolerable good repair.—J. SPARGO; T. GREGORY.

Dartmoor Consols Mines, June 25.—I beg to inform you, Capt. Spargo has again been here, and taken a minute survey of the mine, as well as the machinery; and I find he has completely condemned the old mode of working the Dartmoor Consols Mines. He proposes to intersect the lodes at a greater depth than formerly; he has written me a letter, a copy of which I here send you:—

"*Down Ga'e, Stoke Climsland, Tuesday, June 22.*—DEAR SIR,—I thought it advisable to minutely and carefully survey the company's property before coming to a final decision. Many thousand pounds are sacrificed by going into matters too hastily—therefore, it being a matter of great consideration in fixing our machinery, I can now venture to lay before you my proposed plan of our future operations. First: there will be great propriety in sinking Henry's shaft, which is now at the depth of 15 fms. from surface, 10 fms. under Two Brothers' adit—it will then be from surface 40 fms.; and beg to lay before you my reasons for so doing, which are as follows:—It appears the large bunches of tin alluded to in a former report are within a few fathoms east and west of Henry's engine-shaft, and also the western cross-course, not many fathoms west of the said shaft, plainly shows me, there is not the least doubt but what we shall raise many thousand pounds worth of tin around those cross-courses, as every fibre and droppers that we see in our shallow levels must, ultimately, be thrown into the lode by those cross-courses, which I find forms a left-hand angle. By taking correct bearings of the lodes, and then considering the underlay of those fibres and their bearings, I find they will intersect the lodes at the depth of about 40 fms. from surface, when we can look forward for a plentiful supply of tin, that will amply reward our adventurers for their outlay. This engine-shaft must be sunk deeper, in order to open new levels, and extend them on those lodes, so as to open tribute ground. I do not intend to abandon Pryse Deacon's shaft, but continue that also, which will come in contact with the eastern cross-courses at the depth of 45 fms.; then drive both east and west of this shaft, where we shall open good tin ground. The western bunches of tin are very rich around this shaft; we shall have two good runs of tin ground open at the same time, and also communications between Henry's engine-shaft to Pryse Deacon's shaft. It appears to me quite plain, by so doing, we shall have as splendid a tin mine as any in the two counties. I stated, in a former report, that 2000*l.* would be sufficient (with the materials we have already on the property), to open these mines in an efficient manner, so as to ensure fair returns to the shareholders. I herewith beg to lay before you my estimate of the materials, machinery, &c., that will be required:—First: it will be necessary to remove the engine-wheel from where it now is, to the tail of Two Brothers' adit, where we shall have a sufficient supply of water to work a wheel 50 ft. diameter, which I intend to build on the same axle. Water-wheel, 170*l.*; building the wheel-pit for ditto, 30*l.*; sinking Henry's shaft, 250*l.* (25 fms.); Pryse Deacon's shaft, 100*l.* (10 fms.); repairing capstan, 15*l.*; putting up two whims, 45*l.*; building new stamp wheel, where we remove engine-wheel from, together with stamps, &c., about 30 ft. high, and 24 ft. within the buckles, so as drive nine heads, 250*l.*; patent 10-inch capstan rope, 50*l.*; new 40-inch smiths' bellows, 10*l.*; two whim ropes (100 fms.), 48*l.*—total, 968*l.* I think the above sum, and the materials we have on the property, will be sufficient to carry out our operations. I believe we have sufficient rods, pullies, pumps, and other materials, to carry out our operations with the exception of a few trifles.—JOHN SPARGO."

I have carefully examined Capt. Spargo's report and estimate, and do sincerely believe the proposed plan he has made to be for the benefit of the mine and shareholders; and have every reason to think with his assistance we shall have as good a tin mine as any in the two counties, having been engaged in this mine for nearly 14 years, and having worked on many parts of the rich runs of tin between the two shafts alluded to in Capt. J. Spargo's report. I have also run up Capt. Spargo's estimate, and find, after removing machinery, new wheels, ropes, &c., there will remain about 1032*l.*; and I sincerely think, before this sum is expended, we shall have sufficient tin to give dividends.—THOMAS GREGORY.

MINING IN DEVON.

The tradition of the ancient Cornish miners, that "*mines are not to be found east of Truro Bridge,*" has long since become obsolete. The advancement of practical science, the employment of capital, and the enterprising character of the British miner, has shown that the prejudices of our forefathers do not pass from generation to generation. The great line of demarcation has been passed, and onward the energetic miner pursues his course, that neither the Tamar (which divides the two counties), nor the sterile and unsheltered tors of Dartmoor, can stay his progress, for he leaves behind him evidences of indefatigable industry; whilst the engine and stack remain as monuments of his labour. On the borders of the moor many old mines have been resumed, and new setts commenced, especially in the locality of Ashburton, which are worked principally for tin. In the south of Devon we find several promising lead lodes have been opened, and some are found productive, such as Laddeswell Mine, in the neighbourhood of Kingsbridge. In the north of Devon, in the locality of South Molton, several fine copper lodes have been seen and partially worked, and extraordinarily rich specimens of gold ore have been raised, some of which we have seen, and possess, are as valuable as any exhibited from the richest mines of South America. In the Forest of Exmoor we find a very promising mine, known as Exmoor Wheal Eliza; and, although much progress has not yet been made, still sufficient has been seen of the lodes, as to give every encouragement to the parties to proceed with hope. The Combmartin Mines, which have now been in operation for several years, and are progressing satisfactorily, if we may presume so much from the late outlay of the company, in the erection of lead smelting-works, but we only obtain their annual report—consequently, we cannot ascertain correctly their true position, which we hope to do on receiving an official monthly report. In the locality of Bideford and Barnstaple, we learn that coal and culm have been discovered, and companies formed, for working them, in some instances, we fear, that greater capital will be required to work them expensively and more profitably. Near Bideford is a small adventure working for culm and mineral paint, which has been in operation for the last 10 years, but about six months since a company of 25 persons was formed, with a small paid-up capital—and which are now at a considerable premium; the paint is sold to the Government at 5*l.* per ton, and the culm meets with a ready sale to the lime-burners and maltsters. Near Barnstaple extensive setts have been taken up by another company, for the purpose of raising coal and culm; and from the prospects presented by the operations already performed, there is every reason for the adventurers to anticipate a profitable return. But we fear that this company, from its present limited number of shares (being only 64), will require assistance to carry out their views to that extent they contemplate working, to render the sett so remunerative as they are encouraged to hope. In making this remark we have no authority, but infer it from the small number of shares and expense which attends the erection of machinery necessary for draining the water, &c., and a sincere desire to see the views of enterprising men crowned with success.

With an intention of carrying this subject further, we will conclude the present article with the report of Capt. John Harper to the committee of the North Devon Coal and Culm Company:—"In order to explore the vein, and effectually work the mine, I believe it to be necessary, that you should continue the present adit level, and cross-cut the south vein, and to erect a steam-engine, of not less than a 30-in. cylinder, in order to go down below the adit level after the coal already discovered; and I confidently believe, in which opinion I am borne out by several scientific and respectable practical miners, that the vein in this mine contains anthracite coal of the best description, and that it only requires spirited operations to raise it in large quantities. The present company has risen some of the richest description, standing in some arches by the old men, above the back of the level. I am perfectly satisfied, that this mine presents ample prospects to warrant the necessary outlay for giving her an effectual trial. This opinion is not formed merely on the appearance of the vein, which has been partly explored, as already noticed at some length in my report of the 20th inst. (to an inspection of which I would invite you), but upon various other circumstances, which is materially strengthened by the geological situation of the mine, and by the great success which has attended other coal mines similarly situated, both in Wales and the North of England; and with all the facts which are laid before you in my last report, there can be no doubt but that she will make a good mine, and do well."

BRAZIL MAIL.—Her Majesty's packet *Crane*, Lieut. Lewis, arrived at Falmouth, on Sunday morning, with Brazil mails—having left Rio Janeiro on the 5th of May, Bahia on the 14th, and Pernambuco on the 20th. The *Crane* brings 40,000*l.*—of which 9000*l.* is for the St. John del Rey Mining Company.

NEW SHEET-METAL, FOR SHEATHING, &c.

[Specification of patent granted to Baron Charles Wetterstedt, of Rhode's Well-road, Limehouse, in the county of Middlesex, for improvements in the manufacture of sheet-metal, for sheathing and other purposes, in preventing the corrosion of metal, and in preserving wood and other materials.]—*Newton's London Journal.*

The first part of this invention consists in manufacturing lead, combined with a small quantity of antimony, into sheets for various purposes. The lead is melted, and regulus of antimony is added thereto, in the proportion of from one to two parts, by weight, to 100 parts of lead; the mixture, after being well stirred and skimmed, is run off, and rolled out into sheets. The patentee says, he is aware that lead and antimony have been before combined together; he does, not, therefore, claim the same generally—this part of his invention consisting merely in combining antimony with lead in such proportions, as will allow of the compound being rolled into sheets.

The second part of this invention consists in manufacturing copper, combined with a small quantity of antimony, into sheets for various purposes; and in combining certain other metals together, and rolling them into sheets. The patentee adds to every 200 lbs. of copper in the reining-furnace, when it is ready to be run out, about 1 lb. of regulus of antimony, and 2 or 3 lbs. of calcined soda, heated to nearly the melting point; the metal is well stirred and skimmed, and then it is run into moulds, and afterwards rolled. In carrying out the second improvement, the patentee employs two furnaces, placed side by side—one containing refined copper (prepared as described in the preceding improvement, or refined in the usual way), and the other Muntz's 'patent yellow metal; an iron mould, coated with clay and sand, is made red-hot, and into it is poured one part of copper to four or five parts of yellow metal; but previous to the yellow metal being poured in, a small quantity of melted tallow is sprinkled over it with a brush, for the purpose of cleaning it. The yellow metal is then poured in, and the whole mass is in a fit state for rolling into sheets. If preferred, brass may be substituted for the yellow metal. The same process may be employed for producing a combination of lead and tin; the two materials being used in the proportion of four or five parts of lead to one of tin, or tin and lead combined.

The third part of this invention consists in certain methods of preventing the corrosion of metals, and preserving wood and other materials. A paint, for effecting these objects, is prepared, by melting two or three parts of copper with one part of regulus of antimony, and running the mixture into water, after which it is dried by a gentle heat; then two parts of oxide of copper are added, and the whole is ground—the mixture being moistened during the operation of grinding with as much naphtha as will bring it to a thick pasty state. The metallic composition thus made is reduced to the required consistence, in order that it may be used as paint, by the addition of a solution, composed of tar and naphtha in equal parts. When preparing paints, in which zinc or lead is to be employed, the patentee uses antimony in the proportion of one-and-a-half parts to one part of zinc, or lead; and when tin is employed, the relative proportions should be two parts of antimony to one of tin. These materials are melted together, run into water, and ground, as above described (the oxide of copper being omitted); and they are brought to the required consistence by the addition of oil and turpentine, and suitable drying ingredients, or of the solution, formed of tar and naphtha, before mentioned.

Another composition, or paint, which may be applied to the metal, wood, or other materials, previous to its being coated with the above paints, or which may be used alone as a preservative, is made by melting together 30 lbs. of tar, 30 lbs. of pitch, 20 lbs. of dried soot, and 4 lbs. of tallow, or sperm oil—a sufficient quantity of naphtha being added, to bring the mixture to a suitable consistence.

Another plan for preventing corrosion is, by immersing sheets of copper and zinc, and copper and zinc nails, in a solution, composed of muriatic acid of commerce 60 lbs., oxide of copper, or old copper, 10 lbs., and regulus of antimony 3 lbs.—the sheets and nails being allowed to remain for two or three days in the solution, which is to be kept at a temperature of not less than 70° Fahr. The patentee claims, firstly, the mode of manufacturing sheet-metal by combining lead and antimony. Secondly, the mode of manufacturing sheet-metal, by combining copper and antimony; also, the mode of combining copper and yellow metal, to be afterwards rolled into sheets of sheathing, and for other purposes; also, the mode of manufacturing sheet-metal, by using lead and tin; also, the treating of sheet-metal and nails, as above described. Thirdly, the modes of preparing, or combining, materials, to be employed as paint for the prevention of corrosion of metals, and, also, for the preservation of wood, and other materials.

ACCIDENTS.

Kirkless Hall Colliery.—An explosion of fire-damp took place at the colliery known sometimes as the Hier Patricroft Colliery, but more properly as the Kirkless Hall Colliery, near the boundary line of the townships of Ince and Aspull, on the banks of the Leeds and Liverpool Canal, about two miles from Wigan. The result of the accident was the death of nine persons, very serious injury to eight or ten others, and the injury, more or less, of at least a dozen more. From information collected on the spot, it appeared, that the cause of the explosion arose from the blowing up a quantity of coal by one of the men, which set it on fire; and before the fire could be blocked up, or extinguished, the accident occurred. We must here state, that the firing of coals by miners, which is, doubtless, practised to save their own labour, is against the rule laid down by the proprietors of the colliery, and on this occasion was practised without their knowledge or consent, and no man, if it is known, is allowed to go into the mine without a safety lamp. In addition to the dead and severely injured, there were at least six left in the pit, who were at work near the spot, and who are, no doubt, dead. The following is a list of those brought up after the explosion, none of whom, it is said, escaped unhurt:—*Dead.*—John Cartwright, J. Wilkinson, and John Berry. *In the pit on Wednesday night, and supposed to be dead.*—J. Painman, James Hirst, John Harding, R. Southern, W. Dainty, and W. Jackson. *Severely burnt.*—G. Evans (underlooker), Samuel Evans (his brother), H. Hanson, H. Whittle, J. Rhodes, H. Ashmore, J. Riley, J. Bolton, R. Wilkinson, J. Webster, and J. Belshaw. *Slightly burnt.*—Eli Monk, J. Markland, J. Mills, T. Lurrison, T. Cawsey, and S. Horster. Up to Thursday morning no time had been fixed upon for the inquest, and it is probable it will not take place until all the bodies are got out of the pit. Several of those severely burnt are not expected to recover.

Another Colliery Explosion, near Wigan.—Another of these calamities took place on Thursday morning at the colliery of A. F. Halliburton, Esq., adjoining the North Union Railway. Four men were in the pit sinking to the lower coal, and a blast having been laid and fired, the men proceeded to work with their boring-rods, and it is supposed some of the charge was left behind, when it exploded, and fired the fire-damp. Likewise, two men, W. Winstanley and R. Morgan, were seriously injured, and it is feared they cannot recover; the other two men were behind a tub of water, and were apparently unhurt.

The Felling Colliery Explosion.—The inquest on the bodies of the six sufferers by the recent explosion at the Felling Colliery, near Gateshead, was resumed on Wednesday. Mr. T. E. Foster (the viewer) stated that, in his opinion, the explosion was caused by the kindling of one of the engine fires, under the boiler of which gas had accumulated. The fire under the boiler was "smothered" by the engineman before leaving for the night, and the "damper" shut to prevent the draught. The ignition of the coals, therefore, originated the accident; this opinion was confirmed by several practical men, and the jury decided that the explosion was accidental, coupling, with their verdict, a suggestion that means should be adopted to prevent its recurrence.

Wigan.—As a miner, named Rudd, was proceeding to his work in Mr. Blundell's Colliery, Ince, at about half-way down, the rope broke, precipitating him to the bottom, and, when found, he was literally smashed to pieces. It was the first time the poor fellow had ever descended the shaft of a mine.

Holly Hall Colliery, Dudley.—J. Fellows was killed by a fall of coal.

Brockmoor, near Dudley.—G. Parry was killed by a fall of rock at Mr. Izon's.

Burnt Tree Colliery, near Dudley.—As E. Cox was assisting cleaning out the "sump," at the bottom of Mr. Aston's pit, a portion of the brickwork of the shaft fell on him, inflicting such injuries as to shortly occasion his death.

Tipton.—T. Powell was found dead at the bottom of a colliery.

Park Head Colliery, near Dudley.—An explosion occurred here, severely burning three bandsmen, W. Robinson, W. Purslow, and C. Fletcher, and slightly injuring another. About a quarter of an hour previously Fletcher had tried the safety lamp, and all appeared perfectly safe.

East Cramlington Colliery.—A Morris, aged 10 years, was killed in the west pit, by the rolleys passing over his body.

Callington Mines.—H. Folly, a kibble filler, was killed by a fall of timber.

NEW PATENTS.

R. Wilson, of Low Moor Iron-Works, Bradley, Yorkshire, for improvements in machinery, and the arrangements thereof, for forging, stamping, punching, cutting, and pressing metals, and other substances.

W. E. Newton, Chancery-land, for improvements in manufacturing wheels.

H. Hornblower, Dalgleish-place, Commercial-road, Middlesex, for certain improvements in obtaining motive power.

F. Chaplin, Bishop's Stortford, Herts, for improvements in wheels for railway carriages.

P. G. Preller, Rue de Rivoli, Paris, for improvements in the manufacture of dry sulphuric acid, and in the manufacture of smoking or Nordhausen sulphuric acid.

T. Young, Queen-street, Cheapside, for improvements in card-cases, and retaining or fastening, papers, deeds, and fabrics.—*Mechanics' Magazine.*

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

FRIDAY.—Adair's Main 15 6—Carr's Hartley 17 6—Davison's West Hartley 17 6—Delaval West Hartley 16 6—Hasting's Hartley 17 6—Holywell Main 16 6—New Tanfield 15 6—North Wylam 15—North Percy Hartley 17 6—Original Tanfield 14 6—Ord's Redheugh 15 6—Ravensworth's West Hartley 17—Townley 15 9—Wylam 15 9—Wall's End Acorn Close 17—Bewicke and Co. 17 3—Brown's Gas 14 6—Clennell 16 6—Gosforth 17 3—Hedley's Beamish 15—Hilda 17—Eden Main 17 6—Belmont 17 9—Braddyll's Hetton 16 to 16 3—East Hetton 17—Haswell 16 9—Hetton 16 6—Keepier 16—Lambton 16—Russell's Hetton 16—Richmund 17 6—Shotton 17 9 to 18—Stewart's 16 6—Whitwell 17 3—Hartlepool 16 6—Heugh Hall 17 6—Kellos 16 to 16 3—Thornley 17—Adelaide 17 9—South Durham 17—Tees 16 3—Cowpen Hartley 17 6—Derwentwater Hartley 17—Howard's West Hartley Netherton 17 6—Killingworth 16 9.—Ships at market, 151.

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning, Eleven o'clock.

Bank Stock, 7 per Cent., 197	Belgian Bonds, 4½ per Cent., —
3 per Cent. Reduced Ann., 89½ ⅝ ½	Dutch, 2½ per Cent., 57¾
3 per Cent. Consols Ann., —	Brazilian, 5 per Cents., 84
3 per Cent. Annuities, —	Chilian, 6 per Cents., 92½ ½
3½ per Cent. Ann., 91½ 90½	Mexican, 5 per Cents., 19½ ½
Long Annuities, 9½ 9	Spanish, 5 per Cents., 21¾
India Stock, 10½ per Cent., —	Ditto 3 per Cents., 32¾
3 per Cent. Consols for Acc., 89½ 8¾	Portuguese, 5 per Cents., 81
Exchequer Bills, 1000*l.* 2d., 11 9 pm.	Russian, 5 per Cents., 111½

Mines.—During the past week there has been a considerable business done in the mining share market, with a prospect of a continuance. The inquiries for some shares have been frequent, but sellers are not disposed to lower their prices, and there is but little doubt a gratifying change will take place. The demand has been continued, and sellers firm; still several large transactions have taken place.

Inquiries for Treviskey and Barrier, Trehane, Trelawney, Mary Ann, Franco, Plymouth Wheal Yeoland, Birch Tor, East Wheal Rose, and several other mines, have been made, and in which some business has been done, especially in East Wheal Rose, Trehane, Wheal Yeoland, &c.

A most important discovery has been made in Gwinear Consols during the last week, and which continues to improve up to our last advices—in consequence of which the shares have considerably advanced, although few transactions have been effected here; but in the county, in the locality of the mine, several shares at an advanced price have changed hands.

Some transactions in shares have taken place in West Rough Tor, an extensive sett contiguous to Great Wheal Michell, in which mine they have a winze now sinking in their bottom level, containing fine stones of grey ore,—and in the former the lodes have been opened on the backs for 160 fms., and present the most satisfactory and encouraging appearances.

A few shares in Great Wheal Rough Tor have also changed hands.

The directors of Great Devon Consols, at their meeting on Thursday week, postponed the usual dividend of 5*l.* per 1024th share, which they were capable of paying from the last two months' returns, intending to have a large fund in reserve—thereby precluding the necessity of discounting the ore bills, which, at the present rate of discount, or value of money, effects a saving of an item of very great amount in their accounts.

Dartmoor Consols, we hear, were sold in Lamond's sale yesterday at 4*l.* 8s. per share.

Shares in the following mines have been sold during the week—viz.: Wheal Trehane, East Wheal Rose, Plymouth Wheal Yeoland, Wheal Franco, Wheal Ash, Birch Tor, East Crowndale, South Wheal Maria, Stray Park, Gwinear Consols, Great Wheal Rough Tor, West Wheal Rough Tor, West Wheal Maria, Dartmoor Tin, Tavy Consols, &c. &c.

In the foreign mine shares we do not learn that much business has been done. The only transactions have been in Bolanos, Del Monte, and the Imperial Brazilian.

Railways.—The share market, at the commencement of the week, exhibited an appearance of increased firmness, and business was transacted at an advance, owing, doubtless, to a fall in the corn market, fine weather, and increased speculation. On Wednesday a slight reaction took place, in consequence of a slight depression on consols. This state of things continued up to last night, all kinds of stock remaining flat; and if any alteration could be noticed, it was an evident disposition in prices to recede.

Meetings.—Lancaster and Preston Junction.—At the annual meeting on Tuesday at Lancaster the directors reported that they were now enabled to lay before the proprietors an additional capital account since the one last submitted in June, 1845. That the late committee of management had furnished a concluding report, by which 4504*l.* was placed at the disposal of the shareholders, but the directors recommended that its appropriation should be postponed. Differences with the Canal Company were still unadjusted. A general summary of expenditure, since the formation of the line, showed a grand total of 464,046*l.*—Other railway meetings will be found in another column.

Newcastle and Berwick.—This line was opened throughout on Thursday: the first train left Newcastle at 7½, when the distance was accomplished in three hours, making an average of nearly 22 miles an hour, including stoppages; and the ordinary traffic on the line now proceeds in its regular course. With the exception of three viaducts, the works are complete; and, to obviate the inconvenience occasioned by these exceptions, bridges have been formed with a single line of rails, over which the trains are to pass.

Trent Valley Line.—The opening of this line took place on Saturday last, by three passenger trains of directors and friends—the first by Rugby, the others by Stafford to Tamworth, where an elegantl uncheon was supplied tob etween 400 and 500 ladies and gentlemen; the latter were the most influential in the railway world.

South Eastern: Opening of the Minster and Deal Branch.—This branch of about eight miles was opened yesterday. A train started with the directors and their friends from the Bricklayers' Arms branch. A *dejeuner* took place at Deal; the Mayor in the chair. The line opens for traffic to-day.

HULL, Thursday.—Since our last we have had considerable more business doing on our Exchange, and in almost all cases at better prices; the chief amount of business has been in York and Newcastle, and Newcastle and Berwicks, which, owing to the Thirsk Company having failed in obtaining their bill to Newcastle, have been in great favour, at considerably improved prices; Leeds and Thirsks, notwithstanding, have not receded. To-day, however, prices have not been so well maintained, the advices from America not being of a favourable nature, and the rumour of a repeated failure in the potato crop, having tended to destroy confidence in some measure.

LATEST CURRENT PRICES OF METALS.

LONDON, JULY 2, 1847.

	£	s.	£	s.	d.		£	s.	£	s.	d.
Iron—Bar *a*..Wales..*ton*	8	5—	8	10	0	Copper—Ordin. sheets, *lb.*	0	0—	0	0	11
„ ..London ..	0	0—	9	10	0	„ bottoms .	0	0—	0	0	12
Nail rods „	0	0—	10	10	0	Yellow Metal Sheathing	0	0—	0	0	9½
Hoop (Staf.) „	0	0—	11	15	0	Tin—Com. blocks *g*..*cwt.*	0	0—	4	8	0
Sheet „	0	0—	13	0	0	„ bars	0	0—	4	9	0
Bars „	0	0—	11	5	0	Refined	0	0—	4	11	0
Welsh cold-blast foundry pig ..	4	10—	5	5	0	Straits *h*	4	3—	4	4	0
						Banca	4	8—	4	10	0
Scotch pig *b*, Clyde	3	2 6	3	5	0	Tin-Plates—Ch., IC *i*, *box*	1	8—	1	10	0
Rails, average	0	0—	8	15	0	„ IX ...	1	14—	1	16	0
Russian, CCND *c*..	0	0—	—			Coke, IC	0	0—	1	5	0
„ PSI	0	0—	—			„ IX	0	0—	1	11	0
„ Gourieff	0	0—	—			Lead—Sheet *k* ......*ton*	0	0—	19	5	0
„ Archangel	0	0—	13	10	0	Pig, refined	0	0—	20	5	0
Swedish *d*, on the spot	0	0—	11	15	0	„ common	0	0—	18	10	0
„ Steel, fagt.	0	0—	16	5	0	„ Spanish, in bd.	0	0—	18	0	0
„ „ kegs *e*	0	0—	15	0	0	Spelter—(Cake) *l* on spot	20	0—	20	5	0
Copper—Tile *f*	0	0—	97	0	0	„ „ for arrival	19	15—	20	0	0
Tough cake	0	0—	98	0	0	Zinc—(Sheet) *m* export.*	0	0—	27	0	0
Best selected	0	0	101	0	0	Quicksilver *n* ....*lb.*	0	0—	0	4	6

a Discount 2½ per cent. *b* Net cash. *c* Discount 2½ per cent. *d* Ditto *e* In kegs ½ and ⅝-inch. *f* Discount 3 per cent. *g* Ditto 2½ per cent. *h* Net cash in bond. *i* Discount 3 per cent. *k* Ditto 2½ per cent. *l* Net cash. *m* Discount 1½ per cent. *n* Discount 1½ per cent. * For home use it is 32*l.* per ton.

MONTHLY REPORTS.

Iron.—The demand continues limited, and Welsh bars are a shade lower than on 2d June In Staffordshire no change to report. Scotch pig is a little firmer, owing to the small quantities held in second hands; but there is scarcely any inquiry for exportation. The transactions in Swedish iron and steel in the past month were very few, and our quotations are consequently nominal.

Copper and Yellow Metal Sheathing remain firm.

Tin.—The price of English was reduced 4s. per cwt. on the 21st June, since when the demand has improved. Straits and Banco have not been much in request lately, but prices only receded 2s. and 3s. per cwt. in June, and holders are firm at present quotations. The stock on hand of both sorts is 409 tons.

Tin-Plates continue inlimited demand, but makers show no disposition to lower prices.

Lead.—We have no arrivals of American nor of soft Spanish, and the home demand continues good, but for export it is limited. This market is not so firm as it was, and we quote it about 5s. lower.

Spelter.—Several purchases were made last month, chiefly for exportation, and the price is consequently firmer. The stock to-day is 1800 tons.

[*From a Correspondent.*]

English Bar-Iron continues in great demand, and the quoted prices freely paid for cargoes in Wales. Some of the large makers refuse to name a price at present, owing to the many orders they have lately taken. Rails move slowly at 8*l.* 15s. and 9*l.* for small parcels. Staffordshire manufactured iron also continues in fair demand, and prices fairly maintained. Scotch pig-iron is a shade higher, owing to the few parcels now in hand by the speculators. Swedish iron and steel have undergone no alteration during the past week, and scarcely a transaction reported.

English Copper is in fair demand at present prices.

English Tin has been in better demand since the late reduction. Straits have been sold in small parcels ar 84s., and Banca is nominally 88s. to 90s.

Tin-Plates continue exceedingly dull, IC coke being freely offered at 25s. per box, free on board here, and charcoal about 28s.

English Pig-Lead is a shade lower, and not much doing.

Spelter has been in fair demand within the last fortnight at 20*l.* on the spot, and for small lots as high as 20*l.* 10s. has been paid. The stock on the 1st inst. was 1800 tons.

GLASGOW SCOTCH PIG-IRON TRADE, July 1.—The business done in pig-iron for the last week has been very limited. The market opened rather more firmly this week, and the subsequent accounts of a falling grain market have confirmed an improvement in prices. Some sales have been made at 65s. and 65s. 6d.—cash, for mixed Nos. Today we have buyers at 65s. 6d., and sellers at 66s. to 66s. 6d.—cash.

THE IRON TRADE—SOUTH STAFFORDSHIRE.—The prospects of the staple trade of South Staffordshire for the ensuing quarter are extremely flattering, and the downward tendency of the corn market, accompanied by the probability of an early and abundant harvest, have inspired confidence in the minds of those most interested in this important branch of commercial and industrial enterprise. The preliminary meeting of the ironmasters, in an anticipation of the general quarterly meetings which are held, at stated times, in various parts of the district, was held yesterday, at the Stewpony Inn, near Stourbridge. It was very numerously attended by the influential members of the trade, and we are happy to state that the gloomy forebodings of railway repudiation have not been realised. The trade was represented as peculiarly firm in its aspect—the orders were abundant, and a virtual resolution to support the present prices was unanimously agreed to. The formal meetings of the trade will be held next week, and we are led to anticipate from the activity which has prevailed during the last quarter, and the healthy state of trade throughout the district, that the result will be satisfactory both for past and future.—*Birmingham Advertiser*, Thursday.

Railway Competition—Important Decision.—In the Committee of the House of Commons, last evening (Group 6), after an hour's deliberation, the Chairman announced that the preambles of the Exeter, Yeovil, and Dorchester, and the Salisbury and Yeovil were proved—these two were promoted by the South-Western Company. That the preambles of the Taunton and Castle Carey branch of the Bristol and Exeter, and that from Bleadon to Wells and Glastonbury were proved—these two were promoted by the Bristol and Exeter Company. That the preambles of the Yeovil, Bridport, and Exeter, and the Wilts, Somerset, and Weymouth Amendments Railways, were not proved—these were promoted by the Great Western Company. Of all the blows which the latter overgrown company, in its eagerness for monopoly, and extending its unwieldy gauge, has received this session of Parliament, this is the heaviest. We have little doubt, however, that the public will reap the benefit; and in these decisions, the committee very plainly express a conviction that competition is as good for the west as the north. The whole of the great lines of railway south, north, and west, may now be considered open; and we think it will be to the interest of all parties, if the broad gauge people are content with what they possess, and allow the break of gauge to remain in those towns where it at present exists, nor seek for further extension.

Electric Telegraph.—In the House of Commons, on Thursday evening, Mr. Wakley presented a petition from Mr. S. Porter, claiming to have invented the electric telegraph in 1825, and communicated his discovery to the Admiralty—he prayed inquiry into the subject.

Improved Tubing—Electric Telegraph.—Our attention has been called to some important improvements recently made in the patent welded iron tubing, by Mr. Cornelius Whitehouse, of the Globe Tube Works, Wednesbury, the original patentee. These improvements, we are assured by a friend who has had much practical experience, places Mr. Whitehouse's manufacture at the head of all inventions of a like character. For the electric telegraph, this tubing is peculiarly applicable.—*Railway Record.*

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
1000	Abergwessin	7	12
512	Albert Consols	1	2½
1024	Alfred Consols	4½	40
235	Andrew and Nanglies	28½	16
10000	Ayrshire Iron Company	5	4¾
1624	Balleswidden	9	18
128	Balnoon Consols	25	25
10000	Banwen Iron Co.	2	—
1000	Barristown	4½	18
4000	Bedford	2½	3½
128	Besore Lead Mine	14	10
315	Birch Tor Tin Mine	24½	8
8000	Blaenavon	50	23
100	Botallack	175	140
120	Brewer	5	7
10000	British Iron, New, regis.	10	17–18
—	Ditto ditto, scrip	10	19
128	Budnick Consols	52½	40
128	Burthy	20	21
100	Bwlch Cwmerfin	20	—
128	Callestock	17	30
1000	Callington	19	28
256	Caradon Copper Mine	9½	1
256	Caradon Mines	22½	17
256	Caradon United	24	10
256	Caradon Wh. Hooper	20	4
1000	Carn Brea	15	100
2048	Carmarthen Consols	2	2
112	Charlestown	200	100
166	Cleveland	9	6½
512	Coatlithe Hill	½	1½
1900	Combmartin	7½	4½
500	Comblawn	1½	1½
128	Comfort	45	80
256	Condurrow	20	20
2560	Cook's Kitchen	14	5½
1000	Coombe Valley Quarry	1	1½
1000	Copper Bottom	1	5
1024	Cosheen	4½	10
240	Craddock Moor	15½	15
128	Creeg Braws	120	150
500	Cubert Mine	12½	23
2048	Dartmoor Consols	2	4
7100	Derwent	8½	5
1024	Devon&CourtenayCon.	5½	2½
1000	Dhurode	2	5
186	Dolcoath	30	50
2560	Drake Walls	4	4
10000	Durham County Coal	45	9
256	East Alvenney	6	10
112	East Caradon	42	42
2048	East Crowndale	4½	1½
512	East Combe Silver-Lead	6½	6½
128	East Pool	5	20
100	East Relistian	22	40
9000	East Tamar Consols	1½	2
—	East Wheal Albert	1	3
94	East Wheal Crofty	280	310
256	East Wheal Fortune	2	3
128	East Wheal Rose	50	1300
2048	East Wh. Rough Tor	½	2
—	East of Scotland Iron Co.	2½	1½
128	East Wheal Seton	14	20
256	Exmoor Wh. Eliza	3½	9
512	Fowey Consols	40	45
20000	Galvanised Iron Co.	10	9½
10000	Gen. Mining Co. for Irel.	2	1½
2048	Georgia Tin Mines	1½	1½
256	Gonamena	31½	70
128	Goonvrea	4	1½
244½	Grambler & St. Aubyn	—	15
100	Great Consols	1000	400
256	Great Callestick Moors	22	25
2560	Great Michell Consols	1½	4
256	Great Resugga Moor	2	4
512	Gt. Wh. Rough Tor Con.	6½	23–30
1500	Great South Tolgus	2	2
100	Grogwinion	5	—
1000	Gunnis Lake	1½	3
256	Gwinear Consols	5	25
1000	Hanson	14	2
1000	Harrowbarrow Old Mine	8½	2½
300	Hawkmoor	3	2
6000	Heignston Down Con.	½	2½
256	Herodscombe	½	6
256	Herodsfoot	14	11½
10000	Hibernian	12½	1½
—	Hobb's Hill	4	3
1000	Holmbush	19	8
827	Kirkcudbrightshire	5½	9½
2048	Lamherooe Wh. Maria	9	3
2048	Lanivet Consols	4	2½
200	Larkholes	1	3
128	Lelant Consols	90	60
160	Levant	—	90
1000	Lewis	15	6½
1280	Llancynfelin	6	—
1000	Llwyn Malees	5	—
3600	Llynvi Iron	50	60–65
256	Lostwithiel Consols	7	7
128	Ludcott	3	3
4000	Marke Valley	10	3
5000	Mendip Hills	2	1½
20000	Mining Co. of Ireland	7	6½
256	New East Crowndale	3½	3½
128	North Fowey Consols	25	20
100	North Pool	45	225
70	North Roskear	10½	400
512	North Treburget	2	3
100	North United	72	15
256	North Wh. Abraham	½	12
262	North Wh. Leisure	1½	3½
128	North Wh. Providence	2½	8
15000	Northern Coal Co.	23	2
1200	Old Delabole Slate Co.	25	50
2000	Pantdrainlog Slate Co.	2½	2½
128	Par Consols	900	1000
256	Penhallow Moor	15	4
4000	Pennant	1	3
100	Penrhiw	30	65
256	Pentuan Wheal Mary	2½	6
128	Pen-y-Cefn Mine	50	55
1280	Perran St. George Un.	13	20
128	Perran Wh. Virgin	9½	50
512	Plymouth Wh. Yeoland	4½	22
2048	Prince Edward	1½	1½
112	Providence Mines	35	45
256	Redruth Consols	3	10
10000	Rhymney Iron	50	30
10000	Ditto New	7	6½
256	Rose Consols	10	11
1000	Rosewall Hill	1	5
256	Roswarva Mines	—	12
—	Shotts Iron Company	50	65
2500	Silver Valley	4	2
128	South Caradon	10	410
2000	South Dolcoath	2	2
256	Sth. Friendsh. Wh. Ann	16	14
200	South Harvannah	23	26
9000	South Tamar	½	½

BRITISH MINES—*continued.*

Shares.	Company.	Paid.	Price.
256	South Tolgus	2½	18
800	South Towan	10	1½
256	South Trelawney	15½	10
128	South Yeoland	16½	20
128	South Wheal Basset	110	75
124	South Wh. Francis	160	220
256	South Wh. Hope	—	5
1000	South Wh. Maria	2½	2½
256	South Wheal Rose	11½	1
10000	Southern&Western, Irish	2	4–5
280	Spearne Moor	30	40
256	St. Austell Consols	8	14
94	St. Ives Consols	—	320
128	St. Michael Penkivel	5	10½
1000	Stray Park	43	29
9600	Tamar Consols	5	5½
1024	Tavy Consols	3½	5
6000	Tincroft	7	8
1000	Tin Vale Consols	2	2½
256	Ting Tang	15	10
128	Tokenbury	143½	10
256	Trehane	2	20
5000	Treleigh Consols	6	4
2000	Trenance	2	—
256	Trenow Consols	30	25
96	Tresavean	10	250
120	Trethellan	5	27½
120	Treviskey and Barrier	130	150
256	Trewollack	20	15
128	Trewellard	12	26½
6000	United Hills	5	¾
100	United Mines	300	400
256	Wellington Mines	15	30
128	West Basset	45	25
256	West Caradon	20	168
128	West Cargoll	2	12
512	West Fowey Consols	40	15
256	West Grambler	7	8
—	West Kekewich Consols	—	3
256	West Providence	1	18
200	West Seton	40	60
—	West of Scotland Iron Co.	210	212
120	West Trethellan	5	35
256	West United Hills	2½	4
256	West Wh. Friendship	7½	4
3845	West Wheal Jewel	11	2½
2560	West Wh. Maria	1½	1½
2560	West Wheal Rough Tor	½	2
256	West Wheal Shepherd	5	2½
256	West Wheal Tolgus	21½	3
256	West Wheal Treasury	19	18–20
5200	Wicklow Copper	5	11
184	Wheal Adams	41	10
1000	Wheal Agar	—	8
256	Wheal Albert	10	8
128	Wheal Acland	13	2
256	Wheal Allen	2	5
237	Wheal Anderton	16½	26
128	Wheal Ann	—	50½
128	Wheal Arvose	3½	4
1024	Wheal Ash	3	12
120	Wheal Bal	5½	20
2560	Wheal Barbara	1½	3
256	Wheal Benny	6½	5
256	Wheal Blencowe	8	12½
256	Wheal Bucketts	20	22
256	Wheal Byon Consols	½	½
256	Wheal Calstock	3	4
136	Wheal Clifford	190	190
1024	Wheal Concord	6½	1½
128	Wheal Courtenay	—	20
6000	Wheal Curtis	1½	1½
256	Wheal Dyke	12	13
256	Wheal Fortescue	5½	10
512	Wheal Fortune Consols	3½	6½
2048	Wheal Frederick	2	2
388	Wheal Franco	27	43
1024	Wheal Grace	3	2½
128	Wheal Harriet	45	50
2048	Wheal Holwell	1½	1½
256	Wheal Jane	16	30
256	Wheal Kekewich	4	4
256	Wheal Louisa	7½	12
112	Wheal Margaret	79	250
256	Wheal Maria (Hayle)	19	12½
1024	Wheal Maria	1	350
4000	Wheal Martha Consols.	5	2
512	Wheal Mary Ann	5	23
256	Wheal Mary Consols	38	25
256	Wheal Mary (Lanivet)	6½	4
256	Wheal Maude	1½	1½
128	Wheal Pollard	12½	12
210	Wheal Prospect	4	7
120	Wheal Reeth	27	30
128	Wheal Rose	60	45
2048	Wheal Samson	—	20
99	Wheal Seton	214	850
256	Wheal Sisters	29½	35
256	Wheal Sophia	3½	10
128	Wheal Spearne	10	75
128	Wheal St. Ann	9	15
260	Wheal Trelawney	7½	120
256	Wh. Tremaine (St. Ervan)	1½	20
256	Wheal Tremayne	35	32½
128	Wheal Trew	20	21
256	Wheal Trevenna	3	4
92	Wheal Tryphena	140	300
128	Wheal Venland	12½	10
256	Wheal Vlow (Perranz.)	½	½
184	Wheal Vyvvan	—	60
256	Wheal Williams	2	18

FOREIGN MINES.

Shares.	Company.	Paid.	Price.
5000	Alten Mining Company	14½	4
15000	Asturian Mining Co.	10	6½
20000	Australian	2	6½
10000	Anglo-Mexican Co.	100	1
12374	Ditto Subscription	25	2½
3000	Bolanos	150	6½
2000	Ditto Scrip	15	6½
12000	Brazilian Imperial	20	4½–3½
10000	Cobre Copper Co.	40	45½
8500	Colombian Co. regis.	55	4½
5000	Ditto Scrip	5½	
5000	Copiapo Mining Co.	14	3½
10000	General Mining Ass'n.	20	15½
5000	Kinzigthal Mining Ass.	2	3
20051	Mexican Company	59	—
2000	Mexican & South Amer.	7	3
5000	Mocaubas & Cocaes	25	4½–5
29320	Rl. del Monte, regis. / Ditto unregistered	28½	av. 2½
	Ditto Red Debentures	—	90
	Ditto Black ditto	—	14
	Ditto Loan Notes	150	97½
7000	Royal Santiago	10	5
2000	Pachuca Mines	4	4½
11000	St. John del Rey	15	7
13174	United Mexican	28½	2–1½

THAMES TUNNEL COMPANY.

The number of passengers who passed through the Tunnel in the week ending June 26, was 17,629; amount of money, £73 9s. 1d.

Festival at Great Polgooth Mine.—On Saturday last, about 500 men, women, girls, and boys, who work at this mine, were regaled with baked and boiled rump, rounds, and briskets of beef, and legs of mutton, at the request of the principal shareholder: he had a few weeks previously visited the mine and inspected the accounts, and expressed himself highly satisfied. The day passed with the greatest *eclat.*

BLAST-ENGINES.—TO BE SOLD, a very powerful condensing BLAST-ENGINE, with a 54-inch steam cylinder, and 108-inch blowing cylinder, working 8-feet stroke. It is in a good state of repair, the greater part having been new within the last seven years. Also, a strong CAST-IRON BEAM, 27 feet long, and weight about 12 tons. Also, a 50-inch and a 57-inch STEAM-CYLINDER, to work 8-feet stroke.—For price, and further particulars, apply by letter, 104 Box, Post-office, Wolverhampton.

RAILWAY TRAFFIC RETURNS.

From these returns, it will be seen, that the amount of traffic for the last week, on nearly 2730 miles of railway, was 173,506*l.*, thus accounted for:—98,252*l.* for the conveyance of passengers only, 39,636*l.* for the carriage of goods, and a remainder of 35,618*l.* for passengers and goods together, not respectively apportioned; being an increase over the corresponding week of last year of 19,691*l.*, when the mileage was about 2,292.

Name of Railway.	Lgth. Rway.	Present actual cost.	Last Div.	Traffic Returns. 1847			1846
Arbroath and Forfar	15	£142,900	3 *p. c.*	£ 230	13	5½	£164
Chester and Birkenhead	15	658,293	2½	674	8	5	660
Dublin and Drogheda	35	689,248	3½	898	0	8	970
Dublin and Kingstown	6	349,736	9	1317	2	3	1296
Dundee and Arbroath	16½	156,323	6	885	14	3	325
Dundee, Perth, and Aberdeen	47	——	—	886	0	0	—
East Lancashire	28	814,417	—	962	3	10	—
Eastern Counties	194	6,513,026	7	11606	17	6	8924
Eastern Union	17	227,253	-	1036	9	8	—
Edinburgh and Glasgow	46	2,112,136	6	3227	4	3	3012
Glasgow, Paisley, and Ayr	53	1,567,281	7	2617	3	1	2115
Glasgow, Paisley, & Greenock	23	835,918	2	1306	4	4	1076
Great Southern and Western	56½	1,343,718	—	1724	13	11	—
Great Western	241	9,714,939	8	21550	16	6	20592
Lancaster and Carlisle	70	975,625	—	1435	4	11	—
London and North Western	378½	18,042,004	10	45362	18	11	41342
London and Blackwall	4	1,102,717	1½	1564	3	10	1334
London, Brighton, & South Coast	112	5,109,667	7	9157	8	11	6149
London and South-Western	127	4,278,789	9	9230	17	1	8022
Manchester & Leeds	117½	5,036,391	5½	9353	2	8	6749
Manchester, Sheffield, & Lincolnsh.	49½	1,678,108	5	1941	19	10	—
Maryport and Carlisle	-	——	—	667	7	6	522
Midland Company	329¾	7,862,274	7	20431	10	10	17710
Newcastle and Berwick	9	1,184,079	5	1259	7	7	—
Newcastle and Carlisle	65	1,184,080	5	2319	18	9	2010
Norfolk	70½	1,199,689	7	2011	12	4	1424
North British	72½	1,459,958	—	1704	14	8	768
Preston and Wyre	30	432,014	2½	——			954
Shrewsbury and Chester	15	354,945	—	326	2	8	—
South Devon	20	1,061,283	5	779	7	11	—
South-Eastern	148½	5,888,411	3½	8958	9	1	8560
Taff Vale	30½	888,411	6½	1381	5	3	1233
Ulster	25	358,353	5½	746	3	8	542
Whitehaven Junction	12	——	—	209	0	0	—
York and Newcastle	157½	1,712,317	9	10515	4	11	—
York and North Midland	162½	2,483,256	10	7037	17	1	5895

LEAD ORES

Sold, at Liskeard, on the 26th June, 1847.

Mines.	*Tons.*	*Amount.*	*Purchasers.*
Wheal Trelawney	80	£14 15 0	Sims, Willyams and Co.
Wheal Trehane	44	17 14 0	Walker and Co.
Sold at Truro, on the 26th June, 1847.			
East Wheal Rose	110	£16 7 6	Walker and Co.
ditto	68	13 0 0	ditto
ditto	67	14 2 0	ditto
ditto	25	5 9 6	Dr. Somers.
Sold at Holywell, on the 29th June, 1847.			
Cwmsebon	28	£14 6 0	Newton, Keates, & Co.
Sold in London, on the 30th June 30, 1847.			
Callington	107	£17 19 0	Dr. Somers.

Ticketings for about 80 tons Laxey Lead Ore.

Douglas, Isle of Man, June 29, 1847.

Firms.	*Price per ton.*
Benjamin Somers	£18 17 0
Walker, Parker, and Co.	18 16 6
Combmartin Company	18 0 0
J. T. Treffry	16 10 0
Tamar Smelting Company	16 2 0
Sims, Willyams, and Co.	15 10 0

*** In reply to several correspondents, we may state, that, at Holywell, the price paid for Lead Ores is for 20 cwts., without any allowance for water; whilst, in Cornwall and Devon, the ton, so called, is 21 cwts., and deduction is made for water.

COPPER ORES.

Sampled June 16, and Sold at Tyack's Hotel, Camborne, July 1, 1847.

Mines.	*Tons.*	*Price.*	*Mines.*	*Tons.*	*Price.*
North Roskear	116	£5 6 0	Fowey Consols	114	£5 3 6
ditto	113	2 8 0	ditto	112	6 6 0
ditto	105	4 6 6	ditto	80	4 17 0
ditto	103	5 10 0	ditto	70	3 5 0
ditto	101	5 14 0	Wh. Seton	114	4 11 0
ditto	100	2 8 0	ditto	92	6 8 6
ditto	96	5 8 0	ditto	58	6 10 0
ditto	91	8 7 6	South Wh. Francis	63	14 13 0
ditto	90	8 8 6	ditto	54	4 1 6
ditto	75	5 9 6	ditto	53	12 6 6
Consolidated	87	5 6 6	Creeg Braws	71	4 0 6
ditto	77	6 9 0	ditto	44	5 6 0
ditto	76	5 3 6	ditto	23	4 2 0
ditto	72	9 8 0	ditto	14	4 7 6
ditto	71	6 7 6	ditto	10	1 2 6
ditto	66	7 9 6	South Roskear	55	4 10 6
ditto	54	4 10 0	ditto	50	6 4 6
ditto	43	4 6 6	Wh. Brewer	53	2 6 0
ditto	38	9 10 0	ditto	29	1 13 0
ditto	25	7 4 0	ditto	22	2 10 6
Tincroft	57	5 14 0	Wh. Bucketts	51	4 7 6
ditto	56	4 0 6	ditto	19	10 7 0
ditto	52	3 17 6	ditto	17	2 3 0
ditto	51	4 5 6	ditto	16	5 8 6
ditto	48	6 5 0	Lanivet Consols	77	4 14 6
ditto	47	4 10 0	ditto	21	2 18 0
ditto	46	4 3 0	Wheal Harriet	74	3 11 0
ditto	32	2 0 0	Tretoil	10	3 0 6
			West Grambler	7	4 7 6

TOTAL PRODUCE.

North Roskear	990	£5171 14 6	South Roskear	105	£560 2 6
Consolidated	609	3954 13 6	Wh. Brewer	104	225 6 0
Tincroft	389	1736 4 6	Wh. Bucketts	103	542 2 6
Fowey Consols	376	1908 4 0	Lanivet Consols	98	424 14 6
Wh. Seton	264	1486 16 0	Wh. Harriet	74	262 14 0
South Wh. Francis	170	1849 4 6	Tretoil	10	30 5 0
Creeg Braws	162	685 15 6	West Grambler	7	30 12 6

Average Standard .... £108 4 0 | Average Produce 7¾

Average Price per ton £5 9 6

Quantity of Ore .... 3461 tons. | Quantity of Fine Copper, 262 tons 7 cwts.

Amount of Money £18,869 9 6

LAST SALE.—Average Standard...... £106 8 0.—Average Produce 7¾

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Mines Royal	295	£1452 12 9
English Copper	386	1830 11 5
Vivian and Sons	392	1610 7 3
Freeman and Co.	332	2469 17 6
Grenfell and Sons	628	3539 2 0
Crown Copper Company	43	92 6 8
Sims, Willyams, and Co.	462	2195 12 6
Williams, Foster, and Co.	923	5678 19 5
Total tons	3461	£18,869 9 6

Copper ores for sale on Thursday next, at Andrew's Hotel, Redruth.—Mines and Parcels.—Carn Brea Mines 830—Alfred Consols 331—Wheal Prosper 309—United Hills 308—Par Consols 256—Levant 154—Wheal Agar 64—Botallack 36—North Wheal Basset 34—Cook's Kitchen 17—Wheal Ruby 17—Gwinear Consols 16—West Tolgus 11—Wheal Maud 3.—Total, 2386 tons.

NO SALE on Thursday week, July 15.

COPPER ORES

The following are the Companies by whom the Ores were Purchased, at the SWANSEA SALE of June 24, 1847:—

	Tons.	Amount.
English Copper Company	412	£6288 16 0
Freeman and Co.	119	1941 11 6
P. Grenfell and Sons	448½	2550 1 9
Sims, Willyams, and Co.	217½	4453 2 9
Vivian and Sons	555	7528 7 6
Williams, Foster, and Co.	514	7644 11 0
Total tons	2266	£30,406 10 6

Deaths.

At Crowan, Capt. Jacob Thomas, engineer, formerly of Camborne, aged 69 years.

At Newlyn East, Eleanor, the wife of Capt. J. Middleton, of East Wheal Rose Mine.

At Tavistock, Mr. John Job, captain of Devon and Courtenay Consols Mine, aged 44.

SCOTTISH CENTRAL RAILWAY.

TO THE SHAREHOLDERS OF THE SCOTTISH CENTRAL RAILWAY COMPANY.

GENTLEMEN,—I have to-day, for the first time (though the document bears the date of 11th May last), seen a letter from Mr. Blackburn, chairman of the Edinburgh and Glasgow Railway, to Mr. W. J. Anderson, appended by the latter gentleman to an address from him to the shareholders of the Scottish Central Company.

Mr. W. J. Anderson's address, and Mr. Blackburn's letter, both call for a few comments; and in making them, I shall not enter into details and explanations, which can be understood only by those who know the localities, and who have been blessed with the superabundance of patience and leisure necessary for reading Mr. Anderson's numerous productions, as well as the confutations of them—but shall endeavour, as shortly as possible, to unveil to you the mystery of the present agitation, which, if the object of the agitators should be gained (*although it might serve their purposes*), would leave the Scottish Central Company *without any guarantee*, and convert a comfortable certainty into a desperate uncertainty.

Mr. W. J. Anderson's productions may very shortly be described—

1. As an appeal to the shareholders to decide whether they will abide by their present agreement with the Caledonian, Lancaster and Carlisle, and London and North Western Companies, or try to cast it off, with the view to avail themselves of the tempting bait held out by the directors of the Edinburgh and Glasgow Company.
2. As an assertion that the Edinburgh and Glasgow Company is, from its position, that with which the Scottish Central should naturally connect itself, as "the safest, surest, and most prudent alliance.
3. An allegation by the chairman of the Edinburgh and Glasgow Company, that they never had any wish to monopolise traffic, and are willing "*to admit* the Caledonian Company to a joint lease with them of the Scottish Central."

I. As shareholders of the Scottish Central your object should be to find out, and your interest to consider—First, the ability of the Edinburgh and Glasgow directors to carry out the offer they have made; and next, the sincerity of their intentions.

First, then, as to the existing agreement. It is an agreement as valid as seal and parchment can make it, deliberately entered into by your directors on your behalf, and as deliberately approved of and ratified by yourselves at a meeting specially convened for the purpose of considering it.

It is an old saying, that there are always *two* at making a bargain. In the present case there are no less than *four*—viz.: the London and North Western, the Lancaster and Carlisle, the Caledonian and Scottish Central Railway Companies. Surely then, if you, who have so contracted, should attempt to resile from the agreement solemnly and legally concluded, the endeavour would only show the dishonest wish to break faith, without at all affecting the rights of the three other parties to the bargain, who are resolved to adhere to it honestly, and who will not submit to have it broken.

So much for the agreement to which you *are bound*. And now as to the magnificent offer of the Edinburgh and Glasgow Company. *Nine per cent.* is certainly tempting; but I have no hesitation in telling you, not only that you have no chance of getting it, but that my firm belief is, the Edinburgh and Glasgow directors make the offer solely for the purpose of using you as tools to serve their own ends, by creating a misunderstanding between you and one of your present allies—viz.: their rivals, the Caledonian Company.

Admitting, for the sake of argument, that the existing agreement *could* be annulled, they know very well that *their offer* is not worth the paper it is written upon, till *it is approved of by their shareholders*; and that it their own unsanctioned offer were accepted, they will always be safe to depend on the good sense of their shareholders to release them from so ruinous a bargain. Nine per cent. on £1,020,000, requires a clear revenue of £91,800, after meeting working expenses. Nine per cent.! Why, much as they magnify the resources of their *own line*, 9 per cent. is the highest value they put upon it—the very apex of their aspirations—and the very price at which in the mouth of October last *they offered to sell their own railway to the Caledonian Company*. This, observe, is a *fact for which I pledge myself*, and not an allegation. "Can any intelligent man" then allow himself to be deceived, by supposing them sincere, when they propose to give as much for an unmade and untried line of railway as they asked (and were disappointed in not getting) for their own line, with all its great resources, and "the termini of *two* great cities at the *one end*." (So Mr. J. W. Anderson writes!)

Further, you must permit me to call your attention to the startling fact, that they are holding out to you as a *bait* (a tempting one, no doubt, but a most clumsily-dressed artificial fly), the offer of about £35,000 per annum more than they originally agreed to give under the arrangement which was negatived by Parliament, and £20,400 a year more than is secured to you under the existing arrangement with the combined southern companies. This offer they are making, with a view to secure the *whole* traffic from the North of Scotland to Glasgow. Now, the whole amount of that traffic, as proved by competent witnesses in the discussions which have taken place in Parliament, cannot be rated, after deducting working expenses, as calculated to produce a revenue of more than from £18,000 to £20,000 a year.

The Caledonian Company, as you will see (Appendix No. II.), have offered to divide that traffic; so, that in the hope of obtaining a *monopoly* of the other half, or £10,000 a year, the Edinburgh and Glasgow directors say they are willing to become bound for a perpetual *preferable* annual rent charge of £20,400, and after all to encounter the risk of competition for this traffic, as it cannot be supposed that any arrangement they may make will have the effect of shutting up the Caledonian Company's Garnkirk and Castle Cary lines; the first an old established line, and the other in course of being opened simultaneously with the Caledonian. Can persons gifted with ordinary perceptions, possibly believe them *sincere*, when they make such a proposal? or supposing that their directors, in order to gratify their animosity against a powerful rival, should so far forget the interests of their constituents, can you be credulous enough to believe that these constituents would be so foolish as to implement their folly?

II. Next, as to the allegation—that the Edinburgh and Glasgow Company is, from its position, that with which the Scottish Central should naturally form a connection—this is an obvious misrepresentation, intended to impose on distant shareholders who do not know the country.

In 1845, the Board of Trade described "*the Scottish Central and Caledonian as the southern links of a great trunk line of communication for Scotland;*" and after discussing the schemes proposed by the Edinburgh and Glasgow Company *and its confederates*, they reported, "We can have no hesitation, therefore, in arriving at the conclusion that, on the whole, a decided preponderance of advantage to Scotland is afforded by the Caledonian scheme *in connection with the Scottish Central*, as giving better trunk communication for all the most important streams of traffic."

In the same year this view of the matter was strongly and ably advocated *by the Marquis of Breadalbane, when giving evidence in the House of Lords in favour of the Caledonian Bill.* An extract of his Lordship's evidence will be found appended hereto, No. IV.

In 1846, Parliament, after hearing all that could be said on both sides of the question, adhered to the principles which were laid down in 1845, and *refused to amalgamate the Scottish Central with the Edinburgh and Glasgow Company.* Could any other result have been anticipated from an impartial tribunal, the fact being that the *Caledonian and Scottish Central form a continuous line from Carlisle to Perth of about* 150 *miles in length*, crossing at right angles the Edinburgh and Glasgow Railway, a line 46 miles long, and running east and west? Was it fit and proper, in a public point of view, that the key of the north and south traffic should be placed in the hands of the Edinburgh and Glasgow Company, which, *having failed in defeating the Scottish Central Company* in 1845, they afterwards wished to possess for the sinister purposes pointed out in the circular letter of their secretary, issued at the commencement of the contest? See Appendix No. I.

With regard to the allegation which Mr. Blackburn has ventured upon, "that they never had any wish to monopolise traffic, and are willing to *admit* the Caledonian Company to a joint lease," I must say, looking to the whole of the proceedings from first to last, which have already been so fully detailed in previous publications as not to require repetition, that this is, to say the least, a very modest expression of benevolent intentions on the part of my friend Mr. Blackburn. I beg to observe, however, that before he can fulfil them he must first take *our* lease from us, and then get his *own*. But, as to the disavowal itself, I have only to refer to Mr. Blackburn's own letter of 11th May, where he claims the whole traffic of the Scottish Central flowing from the north to Glasgow, as well as that flowing to Edinburgh.

The Scottish Central communicates with Glasgow by two lines—the Edinburgh and Glasgow, and the Caledonian Company's Castle Cary and Garnkirk lines—both, to say the least, equally convenient for the public. It is obvious, therefore, that the traffic from the North must either enter Glasgow by both roads, or be monopolised by one at the expense of the other and of the public; and that is the monopoly most assuredly which Mr. Blackburn claims, while he at the same time is ashamed to avow, and, therefore, disclaims, with what sincerity or justice will best be seen by reading No. II. of the Appendix, which shows that the Caledonian Company do not aim at any such monopoly, but, notwithstanding the advantage of their position through their agreement with the Scottish Central, are willing to place the Edinburgh and Glasgow Company on a footing of equality with themselves.

With regard to Mr. W. J. Anderson, and his present coadjutor, Mr. Robert Allan, the sharebroker (to whose joint custody you are asked by Mr. Anderson to entrust your proxies), these gentlemen, after the rejection of the Amalgamation Bill, were most active parties in urging and approving the very agreement they are now lending themselves to attack; and Mr. Anderson, when seeking a seat in the direction, in which he did not succeed, disavowed any intention of becoming a party to the repudiative movement (Appendix No. III.) What may have led these gentlemen to change their views and tactics, it is not for me to say.

Much money has already been made by jobbing in the Central stock, and the statement I have given may raise doubts in more minds than my own, whether the present agitation is not promoted by some parties more with a view to serve temporary and private ends than the permanent interests of the Scottish Central Company, or those of the public.

I do not feel called on to notice what is really beneath notice—the personal attack which Mr. W. J. Anderson has presumed to make upon the characters of your directors who carried out the present transactions. They are well able to defend themselves; and I doubt not will, at your meeting to be held at Perth, on the 20th July, show distinctly that no undue haste was used in concluding the existing agreement, and that no offer was made previously by the Edinburgh and Glasgow Company, or any indication given of their intention to do so, even if any offer could have been entertained after the decision of Parliament against the principle of an alliance with them. I shall only say that they are all of them gentlemen, who, in their own counties, are too well-known to require any one's justification; and some of them gentlemen who, from their large estates, as well as personal character, are well entitled to the station and influence they occupy. Of Mr. Anderson I say nothing, because I know nothing, though I have a pretty general acquaintance and knowledge of my own countrymen. As the late Secretary at War used to date his letters from "*Windsor Palace*," so Mr. Anderson, I observe, dates his from "*The United Service Club, Edinburgh*," and not from any domicile of his own, so that I have no clue to aid my inquiries; though, as a Perthshire proprietor, I feel warranted to say, that neither he nor his coadjutor in this agitation, Mr. Allan, have the slightest local connection or interest in the districts traversed by the Scottish Central Railway.

I have the honour to remain, Gentlemen,
Your most obedient humble Servant,
WM. MACDONALD, Powder-hall, Edinburgh.

P.S. FRIDAY MORNING.—My attention has this moment been called to a letter written, by whom, I do not pretend to say, but bearing the signature of "John Todd." Without any disrespect to Mr. Todd, I must really say, that as far as argument goes, his letter is "*telum imbelle sine ictu*," and bears internal evidence that he is not the redoubtable individual in the old Scotch song, the *refrain* of which is "You're a terrible man, John Todd, John Todd!"—W. Mc. D.

APPENDIX, No. I.

Copy Circular Letter addressed by the Secretary of the Edinburgh and Glasgow Railway to the Shareholders.

SIR,—I am instructed by the board of directors to forward the subjoined abstract of a resolution passed by them this day, on the subject of the several projected lines of communication between England and Scotland. The directors feel it to be their duty, not merely to guard their interests in the internal arrangements of the line committed to their charge, but to discountenance any external projects that may seem to threaten its prosperity, and to support such as promise to be beneficial to it; and they are anxious that you should be alive to the bearings of the various projected lines on the prospects of the Edinburgh and Glasgow Railway, and be able to aid the board in their exertions for your benefit. They would urge on you strongly the advantage to the Edinburgh and Glasgow Railway, of your showing every encouragement to the east and west coast lines—viz., the North British, and the Glasgow, Dumfries, and Carlisle, *and of your doing everything in your power to discountenance the Scottish or Central Union and the Caledonian Railways, the latter of which will be highly injurious to our interests.* The directors have the less hesitation in making this communication, as, from their local and personal knowledge, they feel satisfied that the interests of the public of Scotland are, in this instance, identified with those of your railway.

I am, &c.
March 18, 1844. (Signed) R. G. WRIGHT, Secretary.

APPENDIX No. II.

Memorandum handed by Mr. Bruce, of Examt, to Mr. Blackburn.

The Central directors are authorized by the Caledonian directors, to say to Mr. Blackburn, chairman of the Edinburgh and Glasgow Company, and to any other member of that board now in London, that they will at once conclude an agreement, that half of the west traffic from Castle Carey to Glasgow; or, in other words, the whole traffic flowing from the north to Glasgow through the Central, shall be equally divided between the Edinburgh and Glasgow line from Castle Carey, and the Caledonian branch by Garnkirk. Alternate trains may be objectionable: but the traffic being worked by one company, it could be fairly divided between the two lines. Thus half the traffic from Dundee to Glasgow, and the half traffic flowing through the Central from the north, would be secured to the Edinburgh and Glasgow; the east traffic would be secured wholly to the Edinburgh and Glasgow, and the Caledonian would be bound not to renew any project of a line from Polmont, or elsewhere, to join their Edinburgh fork.

With any other dispute between the Edinburgh and Glasgow and Caledonian, south of the Edinburgh and Glasgow line, the Central directors have no desire to enter; but the fair division of the Central traffic to Glasgow, the directors of the Central will see fairly carried out. If this is not agreed to, and the Central made the battle-field between two great companies, money will be spent, and at the end of years no more will ever be got by either, both lines to Glasgow from Castle Carey having received the sanction of Parliament. Mr. Hope Johnstone, the chairman of the Caledonian, is ready to conclude such an agreement as is pointed out in this memorandum, which will be adhered to by the Central board.

The above is a copy of the memorandum handed by me to Mr. Blackburn, the chairman of the Edinburgh and Glasgow Railway Company.

(Signed) ROBERT BRUCE.

APPENDIX, No. III.

Letters of Mr. R. Allan and Mr. W. J. Anderson, signifying their approval of the agreement by the Scottish Central Railway Company with the London and North Western, Lancaster and Carlisle, and Caledonian Railway Companies.

1. *Mr. R. Allan to Mr. R. D. Ker, the secretary of the Scottish Central.*

Edinburgh, Nov. 3, 1846.

DEAR SIR,—We are much obliged by yours of yesterday, the contents of which are confirmatory of all the items of the arrangement we were aware of. They are highly satisfactory in our opinion at least, as you may guess from the enclosed.

Yours faithfully,
R. D. Ker, Esq., Central Railway, Perth. (Signed) R. AND THOS. ALLAN.

N.B. This letter is holograph of Mr. Robert Allan, sharebroker, Edinburgh.

2. *Mr. W. J. Anderson to Mr. Jameson, the Accountant of the Scottish Central.*

SIR,—It seems to have gone abroad, that I wish to repudiate the agreement entered into between the London and North Western, Caledonian, and Scottish Central. Now, I solemnly declare, that is not my intention. On contrary, in seeking office, I had no object in view, but to promote the best interests of the company; and you must have been aware that my friend Mr. Allan and I did everything in our power to aid and assist the directors in confirming the agreement allluded to.

February 22, 1847. (Signed) W. JA. ANDERSON.

APPENDIX, No. IV.

Extract from Evidence of the Most Noble the Marquis of Breadalbane, when examined in favour of the Caledonian Railway Bill before the House of Lords in 1845.

Q. Your lordship is aware of the general direction of the Caledonian Railway?—*A.* Yes.

Q. In your judgment, is the connection which is proposed to be afforded between Edinburgh and Glasgow, and the whole North of Scotland, in the most direct manner, with Carlisle and the chain of railways running from there into England, well adapted to supply the wants of the kingdom?—*A.* According to my opinion, and from the information I have had regarding the circumstances of that line of railway, I should certainly say it is well suited to accommodate the public interests of the country—inasmuch as it is the shortest line of communication, I believe, between the great manufacturing districts of England, and the great manufacturing districts of the West of Scotland; and, as it is in connection with the other lines, forming the great line of communication to the north-eastern part of Scotland, the most populous districts being the north-eastern part of Scotland.

Q. You now allude to Dundee, Aberdeen, and all that country?—*A.* Yes.

Q. Do you know the course of the Scottish Central line?—*A.* Yes, I was the chairman of it, having been the chief promoter of that line of railway.

Q. The Scottish Central Line has received the Royal Assent, I believe; or, at all events it has passed through both Houses of Parliament?—*A.* Yes.

Q. That is a part, is it not, of this direct communication, the southern link of which is to be effected by the Caledonian Railway?—*A.* Yes; it forms now, I should say, a complete line of communication between England and Scotland on the west.

Q. And without any interruption by transhipment?—*A.* Yes; inasmuch as it is entirely by land.

Q. There would be no change of carriages and no stoppages on that account I suppose?—*A.* No; not that I am aware of.

Q. Is it the fact that, without this Caledonian Line, the objects of the Scottish Central are materially crippled?—*A.* Most indisputably, as a great line of communication with England.

THE MINING JOURNAL

Railway and Commercial Gazette

LONDON, JULY 3, 1847.

There can be no disputing the fact, that the fairest test of a mine is its produce. The list, therefore, which we append, of the dividends paid by British Mines, in six months, ending 30th June last, cannot be too forcibly impressed upon the attention of capitalists and the mining adventurer. It shows a statement gratifying to the one and enticing to the other. In the six months ending June 30, 1846, the dividends paid amounted to 82,734*l.* The present list, therefore, shows, in the aggregate, a falling off of 6704*l.*; but when we explain that two mines alone, Devon Great Consols and East Rose,* have paid less this half-year, by 22,528*l.*, than they paid in the corresponding half-year of 1846, it will be seen that the present list shows an actual increase in dividends of 15,824*l.* for the last six months. This increase is chiefly owing to the productiveness of some of the new dividend mines, which have lately come into play—of these South Francis has paid 5580*l.*; Treleigh Consols, 1500*l.*; Wheal Trehane, 512*l.*; Wheal Sisters, 512*l.*; Wheal Franco, 388*l.* Stray Park and Camborne Vean have, it will be seen, paid 3000*l.* in six months (as much as they paid in all 1846), and are likely to pay the same amount in the ensuing half-year. Wheal Seton and Carn Brea have also increased their rate of dividends.

It may be further remarked, that, upon the whole, the mines of Cornwall and Devon are looking promising and well, and many, not named in the present list, likely to pay dividends before many months are passed—of these Trelawney and Mary Anna may be the first. It is not our province, in this place, to review the transactions in the share market, but we may add, that, whilst they have partaken of the dullness which has prevailed in the markets generally, they have not been affected to the extent that might have been reasonably expected; and at the present moment, show decided symptoms of improvement.

DIVIDENDS OF PROFITS PAID BY BRITISH MINES,
In the Six Months ending June 30, 1847.

Mines	*Amount.*	*Dividend per Share.*	*Amount paid per Share.*	*Market value.*†
Devon Great Consols	£10,240	£10	£1	£350
East Wheal Rose	9960	70	50	1300
Carn Brea	7000	7	15	100
Wheal Seton	6940	60	150	850
South Wheal Francis	5580	45	67	220
South Caradon	3840	30	10	410
West Caradon	3456	13½	20	160
Wheal Margaret	3360	30	79	250
Par Consols	3072	29	—	1000
Stray Park and Camborne Vean	3000	3	14	30
Wheal Friendship	2560	40	—	—
United Mines	2500	25	300	400
Callington Mines	2000	2	19	29
East Crofty	1890	20	—	310
Treviskey	1800	15	61	160
North Roskear	1750	25	—	400
Treleigh Consols	1500	½	6	4
Levant	1280	16	—	90
Tresavean	1200	12½	10	250
Consolidated Mines	1000	10	1000	400
Barrier	660	5½	—	10
Trethellan	600	5	5	27½
Wheal Vyvyan	552	12	—	60
Wheal Trehane	512	2	2	22
Wheal Sisters	512	2	29½	35
Wheal Franco	388	1	27	38
West Providence	384	1½	1	18
Wheal Spearn	384	10	10	75
Wheal Bal	120	1	5½	20

Total amount of dividends.....£76,030.

DIVIDENDS PAID BY WELSH MINES.
In the Six Months ending June 30, 1847.

Lisburne	£4000	£40	—	—
Goginan‡	3000	30	—	—

* The Devon Great Consols Company have omitted to pay their last two-monthly dividend of 5020*l.*, having determined to raise a larger reserve fund, in consequence of the increased magnitude of their works: we may add, the mines look well, Josiah and Anna Maria coming into full operation. The two-monthly dividend of East Rose (about 5600*l.*), which should have been declared on the 23d June, is postponed to the 5th July; consequently, this amount could not come into the present return, although virtually belonging to it.

† These prices are taken from our share list.

‡ Another dividend of 1000*l.* will, we believe, be declared on Goginan this day (Saturday).

On Wednesday evening, in the House of Commons, Mr. T. DUNCOMBE moved the order of the day for the second reading of the bill introduced by him, for the better regulation of Mines and Collieries. In last week's MINING JOURNAL we gave a full abstract of the bill, and remarked, in conclusion, that we thought it of too sweeping a nature to be satisfactory, either to the colliery proprietors or the country; and that from its inquisitorial and dogmatic character, it would have a tendency to defeat the very objects for which it was framed, rather than ameliorate the condition of the working collier. Sir GEORGE GREY, on the part of the Government, expressed a hope that the hon. Member would not press the subject further at that moment, as many gentlemen connected with the coal districts of the north had left town, under the impression that the bill was not intended to be proceeded with during the present session. He had received a communication, stating that several extensive owners of collieries were ready to enter into communication with the Government, with the view of adopting some means for providing an efficient remedy against the recurrence of such accidents. He begged to be understood that, in opposing the second reading, he did not oppose the principle of interference. He thought that, if they agreed to the second reading, unfounded expectations would be raised; and that nothing would be lost by the House suspending its decision until they had been able to consider it in all its bearings. Mr. T. DUNCOMBE explained that he was desirous of establishing—

"The principle that legislative interference was necessary for the preservation of the lives of the persons engaged in mines, and also that some better arrangements ought to be made for their regulation. Numerous petitions had been presented on the subject, and the commissioners appointed to inquire into the causes of the many recent accidents were of opinion that the matter was now quite ripe for legislation. The petitioners expressed a decided opinion that many of the explosions might have been prevented by the adoption of common precautions on the part of the coalowners, under the superintendence of efficient inspectors, and that only one in fifty of the accidents which had occurred were unavoidable. It was said that the coalowners were anxious for the protection of life, and ready to do anything for the better ventilation of their mines; but he believed they would never perform their duty until compelled to do so by legislative interference. The petition, to which he had allluded, also complained of the evils of the truck system, and of their being obliged to work by measure instead of by weight; and prayed that inspectors might have the power of enforcing regulations for the regular payment of their wages to each man separately, or to his own order. His object in proposing the bill was to give the inspectors full powers to visit the mines at all periods, having been previously furnished with the necessary maps and plans. With regard to the mode of payment, he proposed that a farthing should be levied on every ton of metal brought to the pit's mouth; the surplus, if any, to be appropriated to the education of the children of the workmen. Although the bill might not be altogether perfect, it had been drawn with great care, and would give great protection to those persons for whose benefit it was intended. He wished to know why the 400,000 or 500,000 persons engaged in working these mines were not to be as fully protected as the persons working in factories? Nearly 500 accidents occurred annually, by which as many persons lost their lives, in consequence of bad ventilation, arising from the neglect and mismanagement of the proprietors of these mines. All he wished the House to do was to affirm the principle, that legislative interference was necessary for the better protection of the lives of persons engaged in mines; and he, therefore, hoped the House would read the bill a second time."

Col. SIBTHORP, Mr. BERNAL, Mr. WAKLEY, and Mr. P. HOWARD, supported the second reading of the bill; and Mr. LIDDELL, Mr. B. DENISON, Lord H. VANE, Mr. AGLIONBY, Mr. FORSTER, and several other Members, recommended the withdrawal of the bill, principally on the grounds that it was too late in the session for a full and fair discussion of a measure of such importance; and Sir GEORGE GREY, although he would not make any pledge, assured the House that the subject was under the serious consideration of Government, and, as the coalowners were ready to co-operate with them, the bill of the hon. Member might materially assist them. Mr. T. DUNCOMBE then reluctantly withdrew the bill until next session, complimenting Sir G. GREY on the fair manner in which he had been met by him; but complained of the way in which Members on his side of the House, who represented the coalowners, took up the subject; and he was not sure whether the *coal kings* would not be as hard to deal with as the cotton lords were some time since.

On Thursday, Mr. T. DUNCOMBE called the attention of Sir G. GREY to the fact of an express having arrived that afternoon, announcing a lamentable explosion at the Kirkless Colliery, near Wigan, on Tuesday afternoon; and not, as are usually the representations made, from the recklessness of the miners themselves. The hon. Member stated, that the pit had been declared unsafe for some days, and on the very day of the accident, the men had required one of the managers to go up and state so; but he refused, and in a few hours the explosion occurred. Out of seven or eight men, who had been got out, two had died, and the rest were despaired of: the worst part of the case was, that six men were left in the pit, and some persons offered to go down to rescue them, should they be alive—but the owner refused. From this circumstance, Mr. DUNCOMBE infers that he was afraid, if they went down, they would give honest evidence before the coroner; but we would suggest, whether, in the absence of all evidence, it would not be as liberal to suppose, in the then dangerous state of the pit, it was to prevent further loss of life. At all events, we shall watch the investigation, and make such comments as we think the facts of the case deserve—not flinching from a full recital thereof, whether as affecting the owner or his viewers.

We think, with Sir G. GREY, that where death unhappily occurs, it is the duties of the coroner and magistrates of the district to enter into the most searching investigation possible, totally independent of the rank of the parties concerned; and, where there are cases of gross neglect, these local authorities have sufficient power to inflict a punishment commensurate with the justice of the case, and as a warning to others. We refer to an account of the accident elsewhere.

We have given at as great a length, as our space admits, an account of the annual meeting of the SOUTH AUSTRALIAN COMPANY, on the 30th ult. It was one of great interest in many respects, but, especially so, as relating to the vast mineral resources of South Australia, and the great value of the company's recently-acquired mineral property. One of the lodes of the Kanmantoo Mine (the native name of the locality), at a depth of 13 fathoms, was *twelve feet wide*, yielding a produce of nearly 40 tons of ore for every fm. deep. The company had just sold at Swansea upwards of 200 tons of ore from the upper portion of this lode. A very respectable miner at work there, who, previously to his emigration from Devonshire, had been working at the Wheal Maria, stated to Mr. GILES, the company's colonial manager, that he had seen no lode in that celebrated mine, which would yield an equal quantity of ore per fathom. In the Lynedoch Valley Estate, another special survey of the company, which was selected solely on account of its great agricultural value, another mine had been discovered, and a sample of its ore sent home, which has been reported, by competent judges at Swansea, to "embrace all the favourable appearances that a miner could wish for, and indicates most clearly great prospects of an abundance of copper."

We call attention to a letter in another column from Mr. THOMAS MOTLEY, C.E., on the subject of the projected iron tunnel over the Menai Straits. Mr. MOTLEY having taken the subject of cast-iron girders for bridges into his serious consideration, since the fall of the Dee-bridge on the Chester and Shrewsbury Railway, his calculations on the strength of which appeared in the MINING JOURNAL of the 12th ult, has constructed a mechanical apparatus for testing the powers of all spans of great length, whether of cast or wrought iron. This was exhibited in the Mechanical Section of the British Association, and gave great satisfaction. If Mr. MOTLEY is right, and we have little doubt but that he is, Mr. STEPHENSON has not more than one-third the strength necessary to support the enormous weight that the construction of the bridge itself, with the passing trains, will impose upon it. We hope Mr. STEPHENSON and Mr. HODSKINSON will look to it; for if they persevere, and we have a second edition of the Dee-bridge affair, their opinions will have but little weight afterwards, and it will bring into contempt the whole engineering talent of the country.

PROGRESS OF FRENCH MINING INDUSTRY.

[FROM OUR PARIS CORRESPONDENT.]

Some official returns of the *importations* of metals in metrical quintals made into France, contain the following interesting particulars:—

	1844.	1845.	1846.
Unwrought cast-iron	531,156	556,485	857,366
Iron in bars	71,604	69,851	78,078
Copper of the first fusion	66,437	95,784	75,471
Lead	193,937	185,918	205,041
Zinc of the first fusion	122,850	136,719	117,615
Coal	16,022,678	20,122,818	19,325,363
Machines and mechanical pieces	——	21,588	31,015

Among the *exportations*, the only items that concern your readers are these:—Works in cast-iron, iron, copper, lead, tin, zinc, 70,390 metrical quintals in 1844; 68,250 in 1845; 71,069 in 1846; machines and mechanical pieces, 1844-1845, 52,866; 1846, 74,532.

Other returns show that the importations in the month of May in the present, the last, and the preceding year, were as follows:—

	1847.	1846.	1845
Copper	11,953	6,936	11,336
Tin	1,877	1,404	2,719
Cast-iron (unwrought)	83,467	89,254	62,047
Coal	2,109,558	1,943,404	2,417,580
Lead	17,397	12,248	16,958
Zinc of the first fusion	10,614	8,454	15,040

During the first five months of the present year, and of 1846 and 1845, the importations have been as follow:—

	1847.	1846.	1845.
Copper	39,704	20,159	43,404
Tin	4,482	4,570	5,710
Cast-iron (unwrought)	414,540	335,227	235,593
Coal	8,406,194	7,521,677	7,448,500
Lead	55,085	58,387	57,747
Zinc	46,014	37,022	33,728

It will be seen from the preceding that a continuous and very remarkable increase is taking, and has taken, place, in the importations of cast-iron and coal, and that even the importation of copper show a great increase over 1846.

The Marine Department gives notice of the following contracts—some of which may be worthy the attention of your readers. At Cherbourg, on 24th July, 500 cisterns for water in sheet-iron; at Lorient, 24th July, 25,000 hectolitres of small coal for the forges; same place, 31st July, 229,300 kils. of *fers laminés* of inferior quality; Rochefort, 24th of July, 20,000 kils. of tin.

A iron establishment at Clermont, in the Oise, is advertised for sale at 8000*l*.

The shareholders of the Grand' Combe Mines, &c., are informed that the interest on the shares is to be payable after to-morrow.

The weekly letter from St. Dizier of the 24th states, that the *moulages* are in a stagnant state like iron; that there are few demands; and that the decline that has taken place is expected to be followed by a further fall.

Referring to a recent communication to the *Mining Journal*, the *Journal des Chemins de Fer* states, that it thinks the dread of your correspondent of France becoming a rival to England in the smelting of copper perfectly unfounded. I confess, that for my own part, I do not think England has much to fear from the competition of this country. France possesses few smelting establishments at present, and those that she has, have not been so triumphantly successful, as to encourage the formation of others on a large scale. The dearness of fuel is one great drawback against which France will always have to contend; and another is, that from the wretched state of her merchant navy, she could not herself import ores from America in very great quantity, and it is not likely that any proposition, for the abolition of the duty on ores brought by foreign vessels, would be seriously entertained. At the same time, the partisans of the maintenance of the copper duties in England, should bear in mind, that it has been seriously proposed in this country to increase the duties on English copper, expressly to encourage the importation of ores for smelting in France. To every opponent of the deceptive protective system, such a measure will appear very foolish; but it must be remembered, that in France free trade principles are not in the ascendant—are only, in fact, professed by a small and uninfluential minority; and that, therefore, it is by no means improbable, that the project would obtain the sanction of the Chamber of Deputies, and of the country; of the former, because it consists of a majority of Protectionists—of the latter, because it is stupid enough to believe, that whatever injures England must necessarily benefit France.

Moreover, the measure would be very tempting to the shipping interest, in which, perhaps, the greatest strength of free-trade really lies. Surely, then, this is an argument, and a strong argument too, in favour of the abolition of the copper duties in England; for what would become of the English smelting establishments, if France—their best customer—should be closed against them? If, when France takes more than one-third of their whole exportations, they find the duty on the import of copper ore oppressive and injurious, what would they do if France were at one fell swoop to deprive them of her custom? And let not the advocates of the duty flatter themselves that France would not be able to smelt ores herself. I grant that she would not; but if her ports were closed against English copper, would not a host of smelting establishments spring up in Belgium and Germany? Nay, more; her great object in so closing her ports would be, to encourage her merchant navy, by giving it the task of going to seek copper ore in South America; but, supposing her attempts at smelting to fail, would it not answer the purpose of the navy just as well to bring copper from the smelting establishments of the United States? and, as France has a navigation treaty with the States, their vessels could aid in bringing copper, in case her own should be found insufficient.

A company has undertaken to resume the working of the mines of silver, copper, and lead, of Giromaguy, which have been lying idle for about 50 years. It represents that silver exists in considerable quantities, and that from 100 kils. of copper ore from 700 to 1000 grammes of silver have been extracted.

The Spanish Government has forbidden exportation of silver money, silver articles, &c; it, however, allows that of the silver drawn from the mines.

The newspapers state, that in digging the foundations of a building at Stockholm, a silver mine was discovered. The digging was immediately suspended, until the mining engineers should have an opportunity to examine it.—*Paris, Wednesday.*

BELGIUM.—The directors of the Grande Montagne Company have already been able to put two *fures* into operation, and in a few days will have two others at work. Constructions are being made with all possible rapidity to enable 20 *fares* to be set at work within the next few months. All the *fures* are to be built on the Silesian system, and will enable 620 lbs. and 520 lbs. of zinc to be produced in 24 hours.

The Government has just published returns relative to the commerce of Belgium during the first five months of the present year. I quote from them the exportations of coal, metals, &c., which show a great increase, as compared with the corresponding period of 1846:—Coal (1846), 490,000 tons; (1847), 670,000 tons—cast-iron, 26,000; 44,000—rails, 2600; 3000—works in cast-iron, 76; 435—works in iron, 243; 461—nails, 2080; 2745—machines, 1325; 1643—ditto (in detached pieces), 121; 310—arms, 1325; 1643—zinc, 1560; 2391—zinc (*laminés*), 587; 816.—Total in 1846, 529,627 tons; in 1847, 731,815 tons. This increase is equal to 40 per cent., and is certainly immense, considering the shortness of the period. It affords another proof of what I often insisted on, that the metallurgic industry of this country is really making wonderful progress, and, regard being had to all circumstances, is almost outstripping England itself.

A few days ago contracts were received by the Government for the supplies of different articles for the State railways. The iron establishment of Ougrée engaged to supply 400 wheels for waggons for 46,000 fr.; and 800 others at a shade higher. Another establishment agreed to supply 10 tnos, iron *étiré*, of the best quality, and 5 tons of *fer battu* for 3020 fr. (120*l*. 16s.)—*Brussels, Tuesday.*

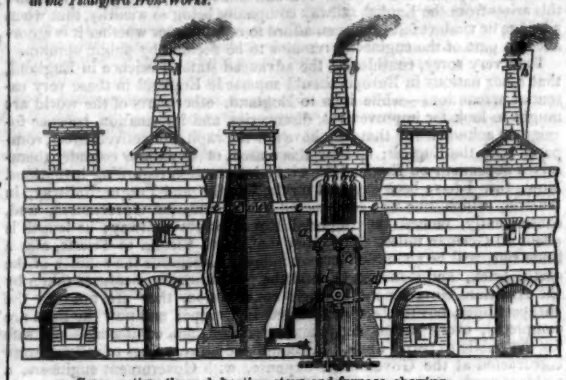
RAILWAY BREAKS.—We have received a letter from Mr. Padley, of Sheffield, in which he informs us, that on the 3d June last he sent to Mr. Brunel a design for a railway break; and received in reply a letter signed W. Barker, by direction of Mr. Brunel, thanking him for the sketch, but stating "that the plan has been frequently proposed, and, he believes, patented by others." It would appear that he infers, from this reply, that Mr. Walkinshaw has had a hint from Mr. Brunel, and that he has adopted his *principle* of break, but varied the mode of *application*. Now, we will inform our correspondent, that Mr. Walkinshaw is not capable of such an act—he being a highly-respectable man, and a frequent and valued correspondent of this Journal; and we know more than one instance where this principle has been suggested, though we believe never patented. Our correspondent's plan is, to have a flat rail, about 6 in. wide, laid between the rails, and a lever placed under the engine, to be made to grip by means of a screw, and thus tend to raise the engine off the wheels. Mr. Walkinshaw adopts the same principle, but applies the lever to the iron rails themselves. Our correspondent must be aware, that more than one invention has been thought of by two persons at a distance nearly at the same time; and this mode of break is one which would easily suggest itself.

NEW PROCESS FOR HEATING THE BLAST OF FURNACES WITHOUT COAL OR LABOUR.

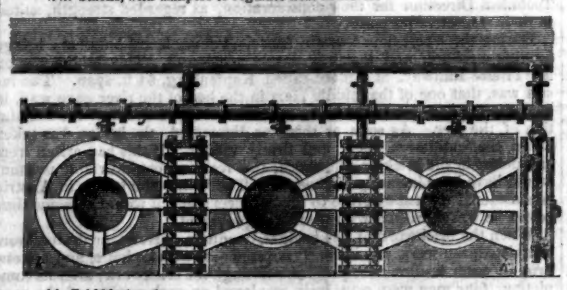
In our last Journal, we briefly alluded to the important invention of Messrs. Dixon and Budd, of the Ystalyfera Iron-Works, by which a great improvement has been effected in the manufacture of iron. The process is so well explained by the patentees, that we prefer adopting their own description and drawings, that our readers may understand the nature and advantages of the system, as practised by themselves:—

HOT BLAST.

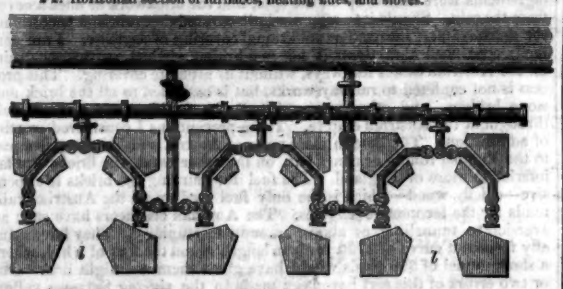
Plan and Elevation of Blast Furnaces, with Sections; shewing the method of heating the Blast, according to Dixon and Budd's Patents, as practised for working Six Furnaces at the Ystalyfera Iron-Works.



a. Cross section, through heating-stove and furnace, shewing—
b b. Hot air tubes.
c c. Inlet pipe, for cold air.
d d. Outlet pipes, for hot air to tuyeres.
e e. Flues, for heating the stoves from furnaces.
f f. Iron doors, for admitting air and cooling stoves.
g g. Top and roof of stoves.
h h. Stacks, with dampers to regulate heat in stoves.



i i. Cold blast main.
j j. Hot blast main.
k k. Horizontal section of furnaces, heating flues, and stoves.



l l. Ground plan of furnaces, and hot blast pipe communication with tuyeres.

The patentees, in introducing to the notice of the iron trade their improvements in the manufacture of iron, do so with the confidence arising from continued and successful practice. They preferred the delay of waiting until they were in this strong position, rather than call the attention of the trade to their plans, whilst they were in the state to which all practical men have a well-grounded aversion—viz., that of an experiment.

The patentees can now confidently assure the trade, that their patented improvements for heating the blast of iron furnaces, as set forth in the accompanying plan, possess the following advantages:—

1. The first cost of erecting the apparatus is considerably less than that usually employed.
2. The liability to get out of repair is much less.
3. The temperature of the blast can be preserved higher, and more equal.
4. There is no cost of coal or labour—neither being required.
5. The working of the furnace is not at all interfered with.
6. The stoves can be readily cooled down without derangement of the apparatus, when cleaning or repair is required.

The patentees, being ironmasters themselves, know that no saving in first cost, coal, or labour, would be considered by the trade as a compensation for frequent repairs. They also know that in many instances the whole benefit of the hot-blast process, and in some instances more than such benefit, has been swept away by the cost and irregularity attendant on the repairs of the apparatus. But they can assure the trade, that their apparatus is not liable to get out of order. At the Ystalyfera Iron-Works the hot-blast pipes that were put to work in October, 1844, are still at work and in good repair. They believe that there is nothing in the whole experience of the trade equal to this duration; but more than this, they are sanguine that where their improvements are carried out under their instructions, the stoves will last longer than the furnaces. At the Ystalyfera Iron-Works, near Swansea, six furnaces may be seen in operation, the blast being perfectly heated to the point of melting lead, by the plan of the patentees applied to five heating stoves. The dampers on the stacks afford the means of moderating the temperature, whilst the doors in front give a perfect command of the stoves, as the draft can be reversed, and a current of cold air introduced at a moment's notice.

Although the plan adopted at the Ystalyfera Works, as shown in the drawing, of having the furnaces in one connected range of building, with hot and cold blast main pipes, is the one recommended where new furnaces are being erected, yet this is not essential. The plan was first tried on a single furnace, and the stove was heated on one side only, yet the application was perfectly successful. It may, therefore, be readily applied to single furnaces standing apart, as is usual in iron-works.

As the benefits arising from the adoption of the plans of the patentees amount to many shillings a ton of iron made (a most important consideration in these times of competition, especially where large quantities are made weekly), besides great comfort and regularity, the patentees respectfully invite the attention of the trade to the subject. In order to ensure an early and extensive use, they have resolved on making a very moderate charge only for their patent right. As the hot-blast apparatus at present in use, requires such frequent renewal and repairs, opportunities will occur in every iron-works, within a short period, of introducing the plans of the patentees without any, or with only a small additional, charge as dead outlay.

The patentees, therefore, congratulate themselves on being enable to present to their brother ironmasters a plan by which all the benefits of the hot-blast process may be secured, free from the hitherto great drawbacks of current expenses and repairs. They have not attained this end without great cost and perseverance; and they look for a liberal support from the trade, now that they present their improvements in the manufacture of iron, freed from all the doubt and risk of an experiment.

TESTIMONIAL TO A MINING ENGINEER.—On Tuesday week, a deputation from the workmen employed at Eastfield Colliery, the property of James Gray Buchanan, Esq., waited on William Hynd, Esq. (mining engineer and manager of these works), at his residence, Eastfield House, and, in name of the workmen and subscribers, presented him with a splendid silver tea service and coffee pot, the latter bearing the following inscription:—"Presented with a silver tea service to William Hynd, Esq., mining engineer and manager of Eastfield Colliery, by the underground and other workmen, and a few friends, as a mark of esteem for his talents and upright conduct, June 22, 1847." This testimonial, so honourable to both parties, was accompanied by the present of a chaste and valuable gold ring to Mrs. Hynd, as an expression of the same regard which the contributors entertain for her many amiable qualities.—*Edinburgh Witness.*

THE ELECTRIC TELEGRAPH.

ELECTRICITY—ITS APPLICATION TO TELEGRAPHIC COMMUNICATION.

We are indebted to a respected correspondent for the following chronological history of the science of electricity—the discovery, and improvements made in it for the last 200 years, down to the magnificent and first successful adaptation of it to telegraphs, by Professor Morse, of the United States. No branch of experimental philosophy (our correspondent remarks) has been so much neglected as that of electricity; indeed, until the 17th century, little or nothing was known of it.—In the year,

1600—Mr. Gilbert, of Colchester, published a treatise in Latin, of various experiments made by him; but his theory was very imperfect, though he increased the list of electric bodies, and also of substances, upon which electricity would act.

1630—Nicolaus Cabœus, at Terrara, repeated the experiments made by Gilbert, and made some progress in adding to the list of electrics.

1670—Mr. Boyle made some discoveries which escaped the notice of his predecessors.
Otto Guericke, of Magleburg (inventer of the air-pump), made some advances, and was the first to discover, that a body once attracted by an excited electric, was repelled by it, and not again attracted, until it had touched some other body.
Dr. Wall, about the same time, observed light and sound produced by rubbing pieces of amber with wool, and experienced a slight shock.

1675—Sir Isaac Newton gave to the Royal Society an account of similar experiments made by him.

1709—Mr. Hauksbee distinguished himself by discoveries in electrical attraction, and repulsion of electric light. After his death, little was done for 20 years.

1728—Mr. Stephen Grey, a pensioner at the Charter House, and his friend, Mr. Wheeler, made a great variety of experiments, and discovered that electricity might be communicated from one body to another, even without those bodies being in contact.

1733—Du Fay, of France, repeated the experiments of Mr. Grey; but added little or nothing of his own.

1734—Mr. Grey made experiments upon iron rods, from whence came the term "metallic conductors."

1739—Dr. Desaguliers made several experiments.

1742—Mr. Boze, Professor at Wittemburg, and other Germans, made experiments. Mr. Winckler used a cushion, instead of the hand, to excite the globe. Mr. P. Gordon, a Benedictine monk, and Professor of Philosophy at Erfurd, was the first to use the *cylinder*, instead of the globe. With his machine, he conveyed the fluid along wires of 200 ells in length, and killed birds. Dr. Ludolf, of Berlin, in 1744, made some experiments. Mr. Boze fired gunpowder by electricity. Mr. Gordon made the electric star. Mr. Winckler, by the agency of electricity, made a wheel to move.

1745—Mr. Collingson sent to Philadelphia an account with these experiments, with a tube, and directions how to use it.
Franklin, with some of his friends, immediately engaged in a course of experiments, the results of which are well known. He was enabled to make a number of important discoveries—proposing theories, accounting for various phenomena, which have been universally adopted, and bid fair to endure for ages.
Several experiments were made in Holland and Germany.
Dr. Miles, of England, fired phosphorus by the application of the excited tube itself, without the intervention of a conductor.
Dr. Watson fired air, made inflammable by a chemical process, and discharged a musket by the electric fluid. He made many other experiments.
Mr. Cuneus, of Leyden, made the discovery of the famous "Leyden Phial;" and Mr. Von Kleist, dean of the cathedral of Camin, is said to have discovered it about the same time. By this discovery, electricity could be accumulated, and severe shocks given.

1746—Mr. Gralath gave a shock to 20 persons at once, and at a considerable distance from the machine. He constructed the electrical battery, by charging several phials at once. Mr. Winckler and Mr. Monnier, in France, transmitted the electric fluid through several feet of water, as a part of the circuit. Mr. Nollet, in France, killed birds and fish by the discharge of the Leyden jars. Improvements were made by Dr. Watson and others in the Leyden phial, by coating the inside and outside of it with tin foil. The Abbé Nollet gave a shock to 180 of the Guards, in the king's presence, and to the whole community of the Grand Convent of the Carthusians, in Paris, by means of wires between them, forming a line of 3600 feet in length. The same experiment was tried in France, through a circuit of persons holding wires between them for 2½ miles. In another experiment, the water in the basin of the Tuilleries was made a part of the circuit.
Mr. Monnier, the younger, to discover the velocity of electricity, discharged the Leyden phial through an iron wire 4000 feet in length, and another of 1319 feet; but could not discover the time required for its passage.

1747—Franklin communicated his observations, in a series of letters to his friend Collinson, and explained in a satisfactory manner the phenomena of the Leyden phial.
Dr. Watson, and others, conveyed the electric fluid across the Thames at Westminster Bridge, making the width of the river a part of the circuit. He proved, that the ground also conducted the fluid, by an experiment with a wire 150 feet long, supported upon baked sticks, using the ground as half of the circuit. In another experiment, he made the *dry* ground a part of the circuit for a mile, and found it to conduct equally as well as water. The transmission of the electric fluid was instantaneous.
Mr. Ellicott constructed an electrometer for measuring the quantity of electricity; and Mr. Maimbury, of Edinburgh, electrified two myrtle trees in the month of October, and they put forth small branches and blossoms sooner than those which had not been electrified. The same experiment was tried upon seeds sown in garden-pots, with the same success. Mr. Jallibert, Mr. Boze, and the Abbé Menon, at Angers, tried the same experiment upon plants, by electrifying bottles in which they were growing. They proved that electrified plants always grew faster, and had finer stems, leaves, and flowers, than those which were not electrified.

1748—Franklin and his friends held an *electrical feast* on the banks of the Schuylkill, near Philadelphia, which was amusing as well as scientific. He gives an account of it to his friend Collinson in these words:—"Chagrined a little, that we have hitherto been able to produce nothing in this way of use to mankind; and the hot weather coming on, when electrical experiments are not so agreeable, it is proposed to put an end to them for this season—somewhat humourously, in a party of pleasure, on the banks of the Schuylkill. Spirits, at the same time, are to be fired by a spark sent from side to side through the river, without any other conductor than the water; an experiment which we some time since performed to the amazement of many. A turkey is to be killed for our dinner by the *electric shock*, and roasted by the *electrical jack*, before a fire kindled by the *electrified bottle*; when the healths of all the famous electricians of England, Holland, France, and Germany, are to be drunk in *electrified bumpers*, under a discharge of guns from the *electrical battery*."

1749—Franklin first suggested his idea of explaining the phenomena of thunder gusts, and of the *aurora borealis*, upon electrical principles; and in

1752—He completed his grand discovery, by experiments. He constructed rods, and brought the lightning into his house, to ascertain if it were of the positive or negative kind. He succeeded in the experiment for the first time in April, 1753; when it appeared, that the electricity was negative. On the 6th June, he met with a cloud electrified positively. His discoveries roused the attention of all Europe, and many distinguished electricians repeated them with success.
Towards the end of the 18th century, the science was extended by numerous and useful experiments.

1787—Mr. Lomond, of France, invented the first electric telegraph of which we have any account. He communicated with a person in a neighbouring chamber, by means of electricity; but it does not appear that it was used on extended lines.

1794—Reizen made use of the electric spark for telegraphic purposes, but never tested to any extent.

1798—Dr. Salva, of Madrid, made a similar telegraph to that of Reizen. No description of his plans have been seen, and probably were never given to the public.
Galvani in 1790, and Volta in 1800, made, as is well known, many important discoveries.

1809—Samuel Thomas Soemmering invented his voltaic electric telegraph.

1816—Ronald invented an electrical telegraph, and tried it at his house, Hammersmith.

1832—Professor Morse was the inventor of the electro magnetic telegraph, and the first really practicable telegraph on the electric principle. All the telegraphs in Europe are invented subsequently.

1833—The Baron Schilling, of Russia, constructed an electric telegraph, which was received with approbation by the emperor, who desired it established on a larger scale; but the death of the baron prevented it.
Counsellor Gauss and Professor William Weber constructed one.

1836—Taquin and Ettleyhansen made experiments with a telegraphic line over two streets in Vienna.

1837—Alfred Vail invented an electro-magnetic printing telegraph.
Wheatstone made an electric needle telegraph.
Steinheil (Dr.), of Munich, erected between that city and Bogenhausen, a magneto-electrical telegraph. In the account he gives of his own telegraph, he says, that Belancourt established, in 1798, a communication from Madrid to Aranjuez (26 miles), by means of a wire, through which a Leyden jar used to be discharged, which was intended to be used as a telegraphic signal.
Masson, Professor of Philosophy at Caen (France), made trial of an electric needle telegraph, at the college of that city, for a distance of about 600 yards. He has since endeavoured to simplify and improve his apparatus.

1837—Davy's needle and lamp telegraph.

1838—Mr. Amyot proposed in Paris to construct an electric telegraph.
Edward Davy—electric telegraph.

1840—Alexander Bain—electric printing telegraph.

1841—Wheatstone's rotating disc telegraph.

All the telegraphs—from Morse to Wheatstone—have several wires and needles; but the latest invention of House, with Jacob Brett's improvement, is indisputably the best of any yet discovered, and is the very perfection of a really printing telegraph, which, with one wire, conveys the letters themselves; and has also this immense advantage over all others—as the communication can be made without the intervention of a third person—that is to say, the parties themselves can carry on their own correspondence.

ADCOCK'S PATENT SPRAY-PUMP.—On Thursday, the 24th of June, a large and influential body of gentlemen, including the directors of the Monmouthshire and Glamorganshire Banking Company, the directors of the Victoria Iron-Works, engineers and managers of coal-works, iron-works, &c., &c., were present, at Llanhiddel, to witness the operation of this important invention. R. J. Blewitt, Esq., of Llantarnam Abbey, M.P. for the Monmouthshire boroughs, was also present. The quantity of water raised was most surprisingly great. So satisfied were all the parties of the practical value and efficiency of the invention, that Mr. Adcock received instructions to put his spray-pump down at a pit, at the Victoria Iron-Works, 230 yards deep, with the least possible delay. The patentee has had a host of difficulties and prejudices to contend with in maturing his invention; and we congratulate him on his success—so important alike to himself, and to the mining world.

LAUDABLE CONDUCT.—The adventurers in Wheal Ruby Mine have ordered their workmen to be supplied with best bag flour, to the amount of 25*l.* per week, at a discount of 25 per cent. on the cost price. The adventurers have also agreed to take payment for the flour at such times as the earnings of their work-people will permit.—*Devonport Independent.*

Original Correspondence.

THE TUNNEL OVER THE MENAI STRAITS.

RESPECTED FRIEND,—I regret I was not in time to get an opportunity of bringing my several subjects before the Association in that form which appeared to me advisable—I, therefore, preferred to leave it to a future opportunity—I was much interested in hearing, at the Mechanical Section, the description of Clarke and Varley's atmospheric tube, which I think is the most effective plan of the kind I have yet seen. I was permitted to exhibit my machine for proving the strain on beams, bridges, &c., in the society's model room, where it was seen by many of the professors, &c., and its simplicity and accuracy was admitted by all. By a professor of this section, I was informed some of the particulars of the proposed iron tunnel, or tube, for conveying a railway over the Menai Straits; and though I was very much surprised at the boldness of constructing cast-iron beams, or girders, 100 ft. long, and less than 4 ft. deep, I was still more astonished to hear of the amazing boldness of constructing a tunnel, or tube, of such magnitude, with such comparatively slight materials. According to my informant, its length is to be 460 ft., clear of the points of bearing—so that I presume the entire length cannot be far short of 470 ft.; its diameter 30 ft., to be constructed with wrought-iron plates, varying from ¾ in. to ½ in. thick—therefore, supposing the average thickness to be ⅝, and including the needful *powerful ribs and stays to resist the vertical and latteral pressures and strains*, together with the interior framing and rails, I estimate its weight at upwards of 30 cwts. for every foot of its length, or about 700 tons. Now the depth of the tube is 30 ft., which is about $\frac{1}{15}$th part of its length, therefore, according to my machine, the strain by its own weight at the middle will be equal to 7½ times its weight—viz.: 5250 tons—and suppose a train with the engine and load to be 100 tons, equal to 750 tons—together 6000 tons. According to Barlow's theory, the safe capacity to resist such a strain ought to be equal to 18,000 tons; and to Tredgold's, 24,000 tons. Now let us see what is the capacity of this projected tunnel, or tube:—

The circumference is (say) 90 ft.; the tension property in the lower half, 45 ft. Suppose the plates average five-eighths of an inch thick, it would give 7½ square inches on each foot; say, that each inch would sustain, before breaking, 20 tons, this would make 150 tons to each foot, which, multiplied by 45, gives a capacity of 6750 tons!—*so that its own weight, and the load, would, according to this calculation, produce a strain nearly equal to the breaking point.* Now, as wrought-iron will begin to stretch at the strain of 10 or 12 tons to the inch, it must be manifest that little more than half its weight, would produce a permanent set, and render it *perfectly unfit and unsafe* for the desired object.

If this projected tunnel, or tube, is actually in progress of construction, or is seriously intended to be made, I cannot but think it would be advisable for the parties concerned to have the matter or subject investigated, *so as to prevent the probability of incurring great pecuniary loss, as well as to guard against the possibility of a great sacrifice of human life.* The foregoing calculation is upon the assumption, that the entire support is intended to be derived from the *tension of the wrought-iron plates;* and I do not see on what else they can depend, unless it may be intended to suspend the tube from towers of masonry. In that case, I cannot but consider it a most *expensive mode* for obtaining the object—far greater than the system of triangular bracing, or straight suspending bars.

Oxford, 7 mo., 1. T. MOTLEY, C.E.

STEPHENSON'S OSCILLATING ENGINE—GOVERNMENT INSPECTORS.

SIR,—It was not my intention at present to have trespassed farther on your valuable columns, but am prompted to do so on this occasion, from having read in your last publication a report of an adjourned inquest on the body of John Gregory, who was killed by the late "accident," I suppose, on the Brighton Railway; the object of that inquest was, of course, to ascertain, if possible, the *cause* of the accident: accordingly, a number of witnesses were examined, amongst whom was Capt. Coddington, the Government Inspector of Railways; and it is to a small portion only of his evidence, in particular, that I wish to direct the attention of your readers and the public in general. The engine in use at the time of the accident was one of Stephenson's "oscillating" engines—so named, I presume, from their having a greater tendency to oscillate than other engines. On Capt. C. being asked by the coroner if he understood the construction of this particular class of engine, replied, "the construction of it renders it more elastic on the road—they oscillate more." "*Can you tell us the cause?*" "There is more overhanging weight at the extremities." Several other questions were put to him, but nothing further elicited as to the *cause* of these engines oscillating more than others. Now, Sir, either Capt. Coddington knows more than what he stated as to these engines having a greater tendency to oscillate than others, or he does not: in either case he is quite unfit for the important situation which he holds. The object of creating the office of an "inspector" was to enhance public security, but how far that object is attained by the present appointment, the public themselves may be the best judges. Not know any other reason *why* these engines should oscillate more than others, only that they have "more overhanging weight"—shocking, indeed, this for a "Government inspector;" he never can be so utterly ignorant of the *cause* as he pretends to be; or, if he is, the few hints which I will now throw out, may tend to his enlightenment. Well, Sir, in the first place, suppose a cylinder to be placed directly over the shaft of the driving-wheels, with the piston-rod working through the bottom of the cylinder, and let the engine be supported by *springs*, resting on the axletrees or shafts of the wheels; now, let the piston be at the top of the cylinder, and steam be admitted *above* it, for the purpose of forcing it down, and turning the wheels round, the springs being released of a weight equal to the pressure of the steam on the piston, I guess the carriage would rise a bit; and, when the steam was admitted *below* the piston, the springs would have to support a weight in addition to the weight of the engine, equal to the whole pressure of the steam on the underside of the piston; and, if these "springs" were springs at all, I guess they would bend a little; and, by continuing the operation, a very pretty effect would be produced. Again, suppose that instead of *one* cylinder and piston, &c., we have *two*, one to be placed *outside* of each of the driving-wheels, and let them be acted upon as before, and the same results will follow; but, let one of the cranks be shifted a quarter of a revolution, so as to form a right angle with the other, and, perhaps, a somewhat different result may be obtained—probably, in addition to "jumping," we should obtain a little "oscillation;" but, it may be remarked, "the cylinders are not placed perpendicularly, but horizontally, or nearly so." I am aware of it; but *as the crank rod is, nevertheless, continually acting obliquely, the same effect is produced*, only in a smaller degree: as to the "overhanging weight," unless it were placed higher than in those engines, producing the great oscillation observable in them, there is no good reason to believe that it would *of itself* produce very little, if any, oscillation; but when it is perceived that during the revolution of the cranks, nearly the whole weight of the engine will be placed alternately on each of the driving-wheels, there will not be much difficulty in understanding *why* they should "oscillate." These kind of engines must also be very injurious to the roads—for, unless the rails, girders, &c., were quite sufficient to carry two of them, they will stand a tolerably good chance of being bent, broken, or displaced, and the road rendered unsafe. I am not aware that any engines have yet been constructed on a principle that would render them free from "jumping" and "oscillation;" but I can confidently state, that engines *may be* constructed, so as to be *entirely* free from these and many other very serious defects, and which defects have caused the sacrifice of life and property to a very great extent. JOHN WESTON.

Portland Town, June 22.

TRIAL RAILWAY.

SIR,—I am much pleased with the perusal of your *Mining Journal*. I consider the various plans for railways, railway carriages, &c., cannot but be of vast importance to the public; and there can be no doubt but many of them will, sooner or later, be brought into action. An idea has just occurred to me, that in order to give full effect to the various improvements in railway travelling, the Government should form a *trial railway*, with many *curves and gradients*, and having *bridges, &c.*, for the purpose of trying the numerous improvements that are daily suggesting themselves to scientific persons. By so doing, railway travelling would in time become perfect, and entirely free from those dreadful accidents which so frequently occur, and which arise from the imperfection of the present system. The railway should be about 15 or 20 miles long; and, as I have said before, embrace all the difficulties and obstacles that so frequently are to be met with. The whole should be under the control and superintendence of a really scientific person, not appointed merely by Government influence.—VIATOR: *Exeter, June 28.*

AUSTRIAN RAILWAY WORKS—COVERING VIADUCTS AND BRIDGES WITH ASPHALTE.

SIR,—Permit me, through your valuable Journal, to make a few remarks to my esteemed friend, John De la Haye, respecting the covering of bridges and viaducts with asphalte, as proposed in his letter, inserted in last week's *Mining Journal*. Mr. De la Haye's letter distinctly points out the great evils arising from allowing the rain to continually penetrate through the brickwork of the bridges and viaducts on our railways. I consider it anything but creditable to our leading engineers (as he very wisely observes), that very little trouble is taken in adopting precautionary measures to prevent this great evil and unnecessary expense. Whether this arises from the English railway companies being so wealthy, that when a bridge or viaduct falls, they can afford to rebuild it, or whether it is ignorance on part of the engineers, remains to be decided by public opinion.

I am very sorry, considering the advanced state of science in England, that other nations in Europe should supersede England in these very essential precautions—while it is to England, other parts of the world are taught to look for improvement, discoveries, and information, because foreigners acknowledge that they have not the capital or conveniences, compared with the English; and for this reason, other nations consider themselves dependent on England for every information regarding inventions. Now, Sir, I have been engaged on the Olmütz and Prague Railway, in Austria, which line was constructed by the Austrian Government, and, consequently, named the Imperial Royal States Railway; its length is about 40 German miles. The other line, from Vienna to Trieste, also a State line, will be about 80 German miles. As regards the solidity of the earth, brick, and stone works, and the precautionary measures taken by the Austrian Government in their construction, they are not only the cheapest lines, but the best constructed in Europe; and now the lines are completed, every means are taken to render them comfortable and safe for the public to travel upon. Although these great lines of railway were constructed at the Government expense, with Government engineers, a resident engineer to every four German miles, with four assistants each, and a chief engineer over every 20 German miles, who was prohibited every other employment, and compelled to be continually on the works, in addition to which precaution, the Austrian Government actually appointed "Government inspectors" to superintend the works during the construction—all plans, sections, &c., &c., were laid before the Imperial Technical Direction for their consideration, as regarded strength, suited to their respective purposes.

During the whole time I was in Austria, I never heard but of one bridge proving a failure, and that was purely accidental. This bridge was on the Trieste Railway, at a place called Kapfenberg, 64 ft. span. The result was, that one of the middle piers in the bed of the river gave way, in consequence of a quicksand being concealed some 10 ft. below the foundation of the pier. As soon as this was discovered, the bridge was taken down, the foundation piled, and firmly rebuilt. If this had arisen from any defect in the brick or stonework, the resident engineer and assistant would have been instantly discharged. The falling of a bridge in Austria is considered a great disgrace to the engineer; and it would be some time before he was entrusted with similar employment.

When the brickwork of the bridges, viaducts, culverts, or drains, were completed, the work was instantly covered over with asphalte, and not one drop of water is allowed to penetrate through the brickwork; after its completion, four men were constantly employed on each section of the road with a portable apparatus, and all materials requisite for that purpose; the ingredients were mixed up on the spot, and the brickwork at once secured from the rain. Should it be afterwards discovered that rain had penetrated, the defective part received an additional covering of asphalte. I am perfectly convinced that there is not one bridge, viaduct, culvert, or drain, on the Austrian States Railways, without its asphalte covering. This process is not confined to railway works, but is extended to all the brick and stone bridges, and other works, in all the fortifications' and citadels throughout the Austrian empire. These precautions I considered worthy of admiration. The lime in most parts of Austria and Hungary is equal to the English roman cement; but, on the other hand, the bricks are far inferior to those of England. The fuel for burning the bricks is expensive—chiefly wood—which is the only fuel used on all the Austrian railroads for the locomotive engines. The Austrian engineers have such an aversion to tunnelling, as almost amounts to stupidity. They have actually formed a curve of 1700 yards in length round the foot of a hill, where a short tunnel of 300 yards would have given them a straight line. One or two errors of this sort have been made in the zig-zag Satzawa valley, on the Olmütz and Prague Railway; but the Government have found out those errors now it is too late; and I have no doubt but ultimately tunnels will be made to avoid the long curves, which can only be travelled upon at about 20 miles per hour.

Again, the Austrian engineers most strongly object to the arches of their bridges being turned in single rings, as in England; but actually tie every course of the arch together, the front bricks are cut to the proper radius. The joints of mortar never exceed a quarter of an inch in the outer work; the bricks are of a soft nature, and time with the Austrians is of no object; but soft or hard bricks, the rule is always enforced—no ring work being allowed under any circumstances.

I once remarked, that it would save them a great deal of trouble if they were to turn their arches in single rings, as in England; but my answer was—"*Ja, die Englandern haben gar nichts zu sagen, heiute bauenn sich ihre brücken und morgen falts es wieder erunter.*"—[The English ought to say nothing; for, if they build a bridge one day, it falls down again the next.]—This, certainly, is a great stain on the English nation, considering the practice, talent, and the resources the English people have over the Austrians; but the English engineers and contractors are so much bound to time, and the consequence is, the works must be carried on, come what will—hail, rain, sunshine, frost, or snow—the work must be done, even if it falls before it has been completed a month. It is my opinion that, if we have many winters like the past, it will test the merits of some of the great viaducts and bridges: one of the winters of Austria would test their durability, indeed—more especially when we take into consideration the manner the brickwork is continually being penetrated with rain.

Six years ago, the time the Austrian Government announced their intention of making the above lines of railroad, M. Thiers, the ex-Minister of France, actually made a tour through Austria, to inspect the surface of the country—and, on his return to France, stated publicly in the French Chambers, that if he never had the headache until the Austrians completed their proposed lines of railway, he should have little to fear: if the little Frenchman should now revisit Austria, he will find all those, to him apparent impossibilities, nearly accomplished; and he will also find, that he can travel most comfortably in a second-class carriage, equal to the English and French first-class, from Prague nearly to Trieste; and in a short time the whole distance will be completed. The railway regulations in Austria are admirable—the watchmen, breaksmen, station men, and others employed by the Government, are chiefly petty officers, selected from the Austrian army, who have distinguished themselves in learning and general good conduct. The Austrian laws, as regards railway accidents, which arise from neglect, are severe in the extreme; and the person that once gets in the hands of the Austrian police for such offences, may consider himself the inmate of one of the Austrian citadels during the remainder of his existence. To confirm what I here state, I annex a notice of an Imperial decree, from the Austrian journal *Wienner Zeitung*. This, I may observe, is only one among many others, equally "despotic," but, at the same time, protective to public safety. This decree was drawn up some time ago, to prevent injury on railways; it provides—That any damage done to railways, to the machines, means of conveyance, &c., of a nature to endanger the lives, safety, or property, of individuals, shall be punished with from one to five years' imprisonment, if no accident occur; and with from five to ten years in the event of an accident. Any act causing any such injury is to be punished with the same penalties; and any *employé* of the railway causing accidents, whatever may be their consequences, by his negligence, is to be punished with from five to ten years' imprisonment; if the consequences of the accidents are very serious, with from 10 to 20 years' imprisonment; and if death be caused, with the punishment of death.—G. SHEPHERD, C.E.: *London, June 30.*

THE OWNERS OF METALLIC ORES IN IRELAND.

SIR,—I should feel obliged if some one of your readers would favour me with the information, whether the metallic ores of Ireland are, in all cases, the property of the proprietor of the soil; or, if the Crown has any interest in ores, save those of the precious metals; or, if ores of silver or gold are to be found, under what circumstances are they allowed to be worked?

Camolin, Ireland, June 28. ONE INTERESTED.

CORNISH MINES.

SIR,—It is a remarkable fact, that there is no School of Mines in Cornwall such as the well-known Schools of Freyberg and Paris, although mining is of such vital importance to that county. It cannot, therefore, create surprise, however deeply we may regret to hear, that the mining industry of Cornwall has now received a terrible shock. With such a college, the pupils of it would, in all probability, have shown to the miner that he had for years been discarding as rubbish a valuable mineral; and also have introduced improvements in the smelting of his ores, so as to have enabled him to withstand the competition of all other countries.

It will be remembered, that the sulphur monopoly stimulated the chemical manufacturers to resist its effects, and only a few years more of the monopoly were required to have shown how perfectly independent we were of foreign sulphur; yet the very material which was before thrown away as worthless, is now used in this country, in place of sulphur, to an extent of probably not less than 60,000 tons annually. But *where* it is raised of the *best* quality, and in the *largest* quantity, there is hardly any of it consumed, in the county. Now, no reason can be assigned for this but the want of a chemical education.

To show what benefits arise from such institutions, I would beg to adduce the fact, that when the present eminent professor of chemistry was appointed to his chair in Glasgow College, the late Charles Macintosh and J. C. Dunlop, Esq., although both gentlemen then of mature years, enrolled themselves as pupils. From their cultivation of this science, these gentlemen aided in establishing many manufactures in that city and neighbourhood—particularly the iron manufacture, which, in the short space of 15 years, rose from about 35,000 tons to 650,000 tons a year in 1845. To the above gentlemen, and a few more, may be traced the cause of the astonishing prosperity of that city—making her now the first in manufactures, and second in population (Calcutta, perhaps, excepted), of any in the empire.—WILLIAM BIRKMYRE: *Devonport, July 1.*

KYMER AND LEIGHTON'S PATENT FIRE-GRATES.

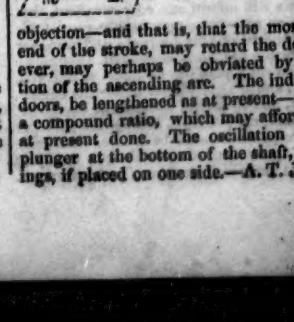
SIR,—Trusting to your usual indulgence, I take the liberty of addressing a few remarks upon a case of annoyance, which I fear is but too common amongst inventors. Kymer and Leighton's patent fire-grates have been for some time in use at the Gwendraeth Iron-Works, carried on by the Messrs. Watney. Mr. Alfred Watney, the resident partner, having expressed a desire that I should not communicate to other ironmasters how many furnaces he had in blast, I refrained for some time from going into the works, in order to meet his wishes upon this delicate point; at the same time, I frequently threw myself in the way of workmen, upon whose report I could depend, to ascertain how the patent grates answered. I had some correspondence with the Neath Abbey Company, and an interview with Mr. Tregelles, who seemed favourably disposed—indeed, so much so, that I expected fully they would adopt the grates for their blast engine-boilers. Not having heard anything from them for a considerable time, I sent them a circular, with a few remarks, to which Mr. Tregelles replied, that having made some inquiry respecting the patent fire-grates, he learnt that the boilers were injured by them, which discouraged him from proceeding further. I went immediately to the Gwendraeth Works, and examined the boilers as closely as I could while at work. There was not the slightest sign of any injury. I then applied to the parties most likely to be informed upon the subject. Henry Williams, from the Neath Abbey Works, was sent over with the blast engine to assist in fitting it up, and has remained ever since with the charge of it. He says, that after the boilers had been constantly at work for three months—days, nights, and Sundays—they were cleaned in succession: he assisting. He was surprised, upon going into the first boiler, to see the plates so clean—not the least impurity adhering to them. He then examined the outside, and was equally struck with the clean and perfect state of both plates and rivets: he called Mr. Charles Jordan, the principal engineer, who also examined the boilers very closely. Both these parties declare they never saw boilers in so good a state after so long working—so much for injury. I was myself a little surprised at the report of the inside being so clean, but regarded it as the consequence of the heat being so purely gaseous—the action of the gas being so steady, uniform, and unremitting. I regret I cannot give the amount of saving in fuel—such data being carefully veiled in mystery at these works; but from all the reports I could collect, I may venture to state, that they are blowing three furnaces and a cupola, casting every day, with one-third of the fuel they used formerly to blow two furnaces only. In spite of all this, I cannot induce other ironmasters using anthracite to adopt the patent. They make the most absurd objections; they say the grate is an awkward impracticable contrivance; that the men will neglect the supply of water, the grate get burnt, and they will have to stop to renew it. It would be just as rational to call a steam-engine an awkward, impracticable piece of machinery; that engineers might neglect to supply the boiler with water, it would get burnt, and the engine would be stopped for want of steam.—T. H. LEIGHTON: *Llandebie, June 26.*

ON BLASTING WITH GUN-COTTON.

SIR,—I have read, in your last week's Journal, the letters of the representative of Chevalier Schönbein and Mr. Mackworth, in reply to my letter of the preceding week; and it was my intention to have replied to them in detail, but [illegible] accident which has since occurred in Essex, by a premature explo[illegible] unnecessary. The accident has too fully co[illegible] as to its danger, and is in itself the best answer that could be given to their paragraphs, as to its safety; but I have no wish to harass their feelings by dwelling unnecessarily upon the subject, and were it not that I wished to instance the danger of using such an article, I should not have alluded to it. I have only to add, in reply to your correspondents, that it matters not whether the danger of using the gun-cotton rests with the men compressing it into the cartridges, or with the workmen using them—the lives of each are equally valuable, and neither ought to be risked in carrying out an invention which promises so few advantages.—D.: *Merthyr Tydvil, June 30.*

EXPANSIVE STEAM ANGULAR BEAMS.

SIR,—It appears, from your Journal, that working steam expansively has formed one of the topics discussed at Sir John Rennie's *conversazione*. There can be no doubt that, in vacuum, steam-power will expand to nearly O; but, by the present mechanical arrangement for the application of this power, a force nearly equal to the load is annihilated at the moment of condensation, especially as the idea of percussive action is now exploded, and the opposite of *vis inertia* of no account—matter in motion, it seems, being not more easily kept moving than a body at rest may be set in motion. But it appears to me, that expansive steam-power might be rendered more available than at present by an *angular* beam; as, to render the principle of expansion fully available, the resistance should diminish with the expansion. This cannot be accomplished by constant leverage alone, nor with combined cylinders. Allow me, with all due deference, to submit the following diagram to the powerful minds still employed on this interesting subject:—



This beam forms an obtuse angle of 135°, or 45° from a right line, and ranges within and without through 67½°, or less, but not in opposite arcs of the circle—*addition* of steam leverage power, and *substraction* of resistance, going on at the same time. A B, horizontal line, beyond which the beam *without* is not to descend—the beam within descending but 22½° below B. A C, and D E, pump-rod in two positions, or beginning and end of stroke. P B, piston-rod, with parallel motion, &c. This diagram sufficiently illustrates the principle now propounded; and it is quite possible that, in the same age, others are thinking of the same thing. There is an objection—and that is, that the more vertical position of the beam at the end of the stroke, may retard the descent of the pump-rod. This, however, may perhaps be obviated by other arrangements, or by a contraction of the ascending arc. The indoors beam may, relatively to the out-doors, be lengthened as at present—thereby creating a further leverage in a compound ratio, which may afford some explanation of the duty even at present done. The oscillation of the pump-rod will not effect the plunger at the bottom of the shaft, nor need the rod impede any workings, if placed on one side.—A. T. J. MARTIN: *Penzance, June 17.*

THE LATE DAVID MUSHET.

SIR,—It is sad, indeed, my father's memory should be exposed to the eulogiums of Mr. Upton. To bear any testimony to his solid reputation, requires some acquaintance with his merits. I know nothing of this person; and it is surprising he should dare to intrude upon a subject, on which, whatever his interest, he has no information. It is my duty to correct a mass of misstatements contained in his letters to your last number. The Dark-hill pig-iron (which works were the property of myself and brother, and not of Mr. Mushet, sen., as stated erroneously by Mr. Upton) is not made by any peculiar process; there is no difference, except in the construction of the furnace, which, as already alluded to in your Journal, I built under an unpleasant opposition on the scientific principles of Mr. J. Gibbons. Their efficacy was proved, by producing, at our first cast, fine foundry iron—an event unheard of with the refractory ores of the Forest of Dean; the strength of our iron is (as frequently occurs) the result of those refractory ores. The Cinderford cold-blast iron brings a high price in the market—its tenacity adapting it, in a high degree, for cast, hardware, and tin-plate. The Parkend hot-blast iron, made with the same ore, possesses amazing strength. Mr. Montague, of Gloucester, the proprietor, has cast railway girders of most unusual power, in proportion to their scantling. I have seen pigs of his iron deflect from 1 to 2 in. ere repeated blows could produce a fracture. As proprietor of the Dark-hill works, these avowals are not to my interest; but it does not consist, with common honesty, to appropriate to a private process what is the characteristic of the district. Mr. Upton's information, on my late father's patents, is equally incorrect; he has some confused notion of two distinct processes. My father had, 20 years since, a patent for manufacturing finers' metal direct from the blast-furnace. To practice it he erected a cupola, which he has not worked for 28 years, and tried to introduce the new process in Staffordshire and Wales. It was not then adopted, nor has it been taken up since the patent-right expired. Mr. Mitchell's letters on cast-iron, in your columns, I think, threw some light on the causes why it might not succeed. Twenty years after, my father took *out* quite a different patent, to abolish the refinery operations. This consists in puddling grey pig-iron with rich ore—the absorption of carbon from the iron, to deoxidate and revive the ore, performs an important abridgement of the process, and the wrought-iron has remarkable toughness. This economical practice would, perhaps, have extensively prevailed, but at the same period "boiling" was introduced, or the puddling pig-iron with the cinder of the different furnaces—an act identical in principle, and only deteriorated by the usual qualities of cinder iron. My late father has stated to me his uncertainty whether these practices were simultaneous, or if the one suggested the other. These two different patents Mr. Upton confounds as practised at Dark-hill—whereas, neither are practised there. His version, that pig-iron, merely reheated with ore, is rolled out, is the greatest nonsense ever printed; it does not appear he has any knowledge of the manufacture of iron. I never said the "fibre" of cast-iron, and the "nerve" of any kind of iron, is rather a novelty. Iron, likewise, is the production of the furnace, not of the proprietors, as he has it. A patent which has expired cannot be encroached on; this passage of confusion alludes, probably, to the latter patent. This has been used, with great improvements, by Mr. Hill, of the Plymouth Iron-Works. If this be the ironmaster Mr. Upton endeavours to attack, I can only state, my late father informed me, two years since, that Mr. Hill had so improved, and entirely altered, his idea, that a new patent would be required to secure it; I likewise know it as a fact, that Mr. Hill, at that time, offered a sum to purchase the remainder of my father's term.

In reply to Mr. Upton's beggarly and impertinent account of my father's circumstances and capacity for business, I have to state, that, for the last 20 years, his income ranged from 2000*l.* to more than 4000*l.* per annum; he was *totally unconnected with the Dark-hill Iron-Works*, and he divides to his widow, children, and grandchildren, property cheaply estimated at 80,000*l.*

Mr. Upton avows himself the author of the unparalleled advertisement, and I shall take legal advice on his conduct. It was correctly stated in the *Mining Journal* of the 19th inst., that Messrs. Bald, Macintosh, and others, considered the Scotch proprietors, who derived great wealth from Mr. Mushet's discovery of the blackband ironstone, would honour themselves by a public testimonial to the inventor; but this is no fraudulent appeal of destitution—and if it be not, which I am not aware it is, that any one has betrayed my mother's advanced years into the sanction of a step, which would have been as deeply mortifying to my late father, could he have anticipated it, as it is distressing to his relations; the act is truly infamous. The annoyances which my father had suffered for five years, and which Mr. Upton, with abominable indecorum, drags before the public, he is, perhaps, as well acquainted with as with the other details. My father, likewise, did not die at *Coleford*, as stated in the advertisement, but at his residence, in Monmouth: I advisedly believe this error is intentional, with an obvious object by certain parties.

Mr. Robert Bald having written to me, to say that the advertisement, which contained his name, "was inserted without any authority from him—very contrary to every right principle," I have stated as much to the Editor of the *Times*, and append my letter.

61, [illegible]*rtion-street, June* 28. DAVID MUSHET.

TO THE EDITOR OF THE TIMES.

SIR,—I have to state, in justice to Mr. Robert Bald, of Edinburgh, he acquaints me his name was appended to the extraordinary advertisement—the insertion of which, in the *Times* of the 21st inst., I have already noticed—without his knowledge, or authority.

London, June 28. DAVID MUSHET.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—To clear Mr. Upton from the imputation which has so unwarrantably been laid upon him, I beg leave to state, that he had the full consent and approbation of the widow of the late David Mushet, in undertaking that which has been by him transacted, and which has so much offended the sickly posthumous delicacy of a party who might, had he attended my father's funeral, have learnt more accurately how matters really stood with his widowed mother. I regret being thus compelled to clear the character of a sincere friend at the expense of a relation so near to me as Mr. Upton's accuser; but it is due to Mr. Upton, who has been actuated by the best and kindest motives, without the slightest intention of giving offence to any person. Mr. Upton has nowhere stated that Mrs. Mushet had been left unprovided for; neither has he claimed as a charity that which is due rather as a token of respect, than as a mere eleemosynary tribute, to the widow of his departed friend. I really do not see why my mother should not have a testimonial of respect to her husband's memory, even though she were in affluent circumstances, which is very far from being the case. Mr. Hudson's wealth was no sufficient argument against the levy of a testimonial of respect in hard cash—and what has Mr. Hudson ever done to earn such a mark of popular esteem? or what has my father *not done* to deserve, in tenfold proportion, such a tribute granted to the meritorious promoter of his country's best interests, not to the mere accumulator of wealth? Surely the man who, by his early labours, advanced the science of iron-making at least half a century in improvement, deserves as much, at the hands of the British nation, as the overgrown speculator in railways, or the most celebrated *constructor* of the present day, for whom a testimonial has been recently in contemplation. ROBERT MUSHET.

Coleford, June 30.

[We too much regret the unfortunate difference which appears to exist among the family of the esteemed David Mushet, to willingly contribute to its aggravation, by permitting controvertible statements to appear in our Journal; we have determined, therefore, with the letters which we now feel called upon to insert, enclosing the correspondence. We do so, however, in the full conviction, that any little misunderstanding will be best rectified by the intercession of friends, rather than by the continuance of a "paper warfare," in which, indeed, the public is little interested.]

APPLICATION OF AIR TO STEAM-BOILERS.

RESPECTED FRIEND,—Agreeably to Mr. Walkinshaw's expression in his letter to thee of the 1st inst, the priority of the application of air to steam-boilers is due to Mr. James Glasebrook, of Ironbridge, Shropshire, who erected, several years ago, a large blast-engine upon this principle at the Calcutt Iron-Works, Broseley, belonging to the late Mr. A. Brodie, and which appeared to perform its work very well. The system of ventilation as originally proposed by Mr. G. Shepherd, C.E., in his lecture, given at Lawley Bank, and transferred by him to thy Journal of the 6th ult., has been in practice in the shallow works of Shropshire for nearly 100 years past. His youthful and limited experience should not be put in comparison with the more matured of Messrs. Mushet and Darlington. I should thank him to state "where" he has had "shaft sinking," under his "own personal superintendence," in England.—OBADIAH: *Lawley Bank, June* 30.

STEAM APPLIED TO A BLAST FURNACE.

SIR,—In reply to Mr. Walkinshaw's remarks, in the Journal of June 5, respecting the water regulator mentioned by Mr. Mushet, I may state that any person can, by simple inspection, satisfy himself of the correctness of Mr. Mushet's statement.

Coleford, June 16. JOHN REDGE.

THE SAFETY LAMP—TESTIMONIAL TO DR. CLANNY.

SIR,—As one of the parties concerned in promoting a testimonial to Dr. Clanny, I request that you will do me the favour to insert a few observations, rendered necessary, I think, by the letter of "A Coalowner," in your recent Number. The writer of that letter has not, it appears to me, appreciated the motives of Dr. Clanny's friends, or the grounds on which they have sought support in their object. They simply considered a testimonial proper, on the ground that Dr. Clanny had been the first person to propose to light mines with safety to the miners—the first suggester of the idea, in fact, and the first to call public attention to the matter; also on account of his persevering efforts on the subject. We did not enter into any discussion as to the merits of the present lamp which bears his name, nor does that question affect the *grounds* on which we proposed a testimonial. Admitting that Dr. Clanny has been mistaken or misinformed, as to the extent to which his present lamp is used in some collieries, I can assert from undoubted facts, that is used extensively in some collieries, both in this district and in the midland counties, and has been manufactured to a considerable extent in this town. I have conversed with several viewers who have used the lamp, and all have spoken very highly of it to me, and expressed their intention of using it—of course, many collieries have large stocks of lamps on hand, and Dr. Clanny's lamp cannot come into use at once.

I cannot agree with your correspondent, that it is Dr. Clanny's duty to apply everywhere for information as to the value of his lamp, and agree with the Doctor, that after the great pains which he has taken, and the published statements from scientific and practical men which have already appeared, as to the value of his lamp, it is only right, courteous, and gentlemanlike, for the coalowners and viewers to save him this trouble; but "*A Coalowner*" writes as if in such cases the inventor were the obliged person. It was not so, when an invention was brought before them, sanctioned by the great name of Davy; then it was received with *reverence*, and adopted almost *without discussion*.

In conclusion, I deeply regret that any temper should be shown on a subject so important, implicating the lives of men, and a valuable branch of industry. I hope that the viewers and coalowners will give this lamp a fair trial: and that, as it evidently presents some advantages, we may have a report from practical and scientific men, from which we may learn whether these advantages are accompanied with attendant disadvantages, or not?—CANDIDUS: *Newcastle-on-Tyne, June* 29.

THE AMERICAN STEAM-SHIP, "WASHINGTON."—We have received from correspondent the following particulars of this vessel, which our trans-Atlantic brethren intended should have eclipsed all other steamers; with the results our readers are already acquainted:—Length, 230 ft.; beam, 39 ft.; depth of hold, 30 ft. 6 in.; burthen, 1750 tons. Her keel is 16 in. square, with a false keel of 5 in. thick; her frame is of white oak, with the exception of the apron, transoms, fashion-pieces, and stanchions, which are of live oak and locust. There are three decks, extending fore and aft—the lower deck is intended to be used for the stowage of cargo, and is capable of receiving nearly 400 tons of measurement goods. On the 7th of September, 1846, the first timber of her frame was moulded; by the 15th of October the whole frame was completed, and she was launched on the 30th of January, 1847, from the building establishment of Messrs. Westervelt and M'Kay. The engines were constructed by Messrs. Stillman, Allen, and Co., and consist of two cylinders 72 in. in diameter, and 10-ft. stroke. The framing is of wrought-iron; the engines supplied with steam from two boilers 36 ft. long, and 15 ft. wide, each of which weigh over 38 tons, and are constructed to stand a pressure of *thirty pounds* to the inch; paddle-wheels 39 ft. diameter, and 7 ft. 6 in. dip. It has been stated, that the engines are capable of working to 2000-horse power. Upon her first trial trip, in smooth water, drawing 18 ft. 6 in. forward, and 17 ft. 2 in. aft., with an average pressure, it is stated, of only 12·5 lbs., engines making 13·5 revolutions, she acquired a velocity of 15·5 miles per hour. In a report, made to the directors of the company by Lieut. Brownell, an agent of the United States Government, he stated, that—"During the day (24th May), it was ascertained that the engines worked well, and the ship steered remarkably so; she had a speed of 15·6 miles per hour with 16 lbs. of steam, making 14·5 revolutions per minute." It has been stated, to account for her defeat on the late voyage, that she had some defect in her machinery, which took some days to set right; if such really be the fact, why not publish the log kept by the officers of the vessel, accompanied by the one kept by the engineer? We shall then, probably, be enabled to judge why this trans-Atlantic wonder, which was to make "16 to 17 miles per hour on the ocean in ordinary weather" (*vide New York Herald*), with boilers capable of working to 30 lbs. to the inch, and which was to have shown John Bull how to navigate the Atlantic—has been so shamefully beaten by the *Britannia*; place the log of the latter vessel in juxta-position with the former, and our friends of the New World will then perceive it requires something more than either *pressure* or *puff* to form an ocean steamer, suited to the wants of the "Ocean Steam Navigation Company," and to outrun those of English build.

IMPROVED LOCOMOTIVES AND OTHER MECHANICAL INVENTIONS.—We stated, in a former Number, that a company had been formed in Paris, for the purpose of testing the improvements now making in locomotives and other mechanical inventions, which too frequently cannot be brought to perfection, or even undergo an impartial trial, in consequence of the inability of the parties to incur the outlay attending all scientific and engineering attempts at improvement. The grand object of this company is to study, construct, and test seriously, the inventions which may be submitted to them, particularly all improvements in locomotive engines. It offers to inventors all possible facilities, or means, of realising and applying their ideas to the greatest advantage, by having constructed at their establishment the most approved models, whose results are certain—thereby saving that onerous responsibility to railway engineers, and builders of locomotives generally, which is far from being enviable. In thus overcoming the difficulties attending the full development of mechanical inventions in this age of science, industry, and speculative enterprise, the company looks forward to the most beneficial results from such a long-wished-for establishment in France. It appears, that from the railways now being constructed, conceded, or about to be conceded, from one end of the country to the other, they will require more than 3000 locomotives in less than 10 years for the different lines; and after that period, there will be, probably, as many more—so that the making of locomotives will become as necessary a business as that of the breeding of horses formerly, as the one replaces the other, is more powerful, but is sooner worn out, and, consequently, oftener renewed, more from the great improvements making in engineering science, than the age of the locomotives themselves. The company thus offers to inventors, engineers, builders, and railway directors, a neutral ground, on which the former will have an impartial judgment, at a trifling indemnity at first, for his ideas being tried, if they are worthy of it, and a good remuneration in case of success; whereby the engineer will be able to appreciate, from the experiments made, the utility, or inutility, of this and that invention, and its applicability, to be used by the company he may represent; and where, also, the builder of engines, &c., will always be able to obtain plans and models of the improved inventions, in case the engineers of railways, or other companies, may give him an order. This company is, first of all, to commence the undertaking, by having a locomotive, with three propelling pistons acting on the same axle, by means of three screws, dividing the circumference in three parts, which three pistons will be moved by three cylinders, each receiving its own steam by a separate and independent distribution, by which means the locomotive can run with three, with two, and even one propelling piston, according to the weight of the train and the nature of the gauge. The cylinders are equal to those of the present locomotives, and furnished with special valves. This description of engine has been studied for many years by Dr. Jules Guyot, and will be built by one of the first engineers of Paris. It is proved, that three will be a saving of at least 20 per cent. in steam, with an addition of 20 per cent. in power over the best locomotives of the present day of two propelling pistons, and furnishes 50 per cent. disposable power over the maximum produced by the strongest engines. We shall, in all probability, at future periods, be able to give more interesting details of this speculation, and its results, in the development of science.

MACHINE FOR DRILLING ROCK.—A novel machine has lately been constructed by Mr. Nicholson, mechanical engineer, at the Lound Foundry, who has modified and somewhat altered the design of a similar one, for which a patent was granted in America some time back. Previous to its being forwarded to its destination on the Caledonian Railway, Mr. Nicholson tested its power and efficiency on the hard, compact, calcareous rock near the limekilns on the Kendal Fell, and the result was such as fully realised his expectations. The machine is extremely simple in its construction, and is worked by horse-power (although it may be made to any size, and worked by various means), and is admirably adapted for all descriptions of perpendicular boring. The drill or ramper weighs 325 lbs.; and the manner in which the machine is made to lift this ponderous implement displays remarkable mechanical ingenuity, every turn of the connecting-wheel causing a portion of the machinery to lift up the drill until that portion comes in contact with a cross-bar at the top, by striking which the drill is again released, and falls with great force into the hole. By another ingenious contrivance, the drill is made to turn half round at each fall, thereby making the boring perfectly round and even. On Wednesday morning last, the machine was put in operation on a table of limestone rock, to the north of the kilns; and about nine o'clock, by the aid of two men and two horses, it had bored a hole 11 ft. deep, and 4 in. in diameter—thereby performing what it was computed 30 men, in the space of time, would not have been able to have accomplished. When in motion the ramper made 40 to 42 strokes per minute, and bored about 2 ft. an hour; but it is capable of making 60 strokes per minute. In the afternoon the hole was charged with 30 lbs. of powder, and a blast took place, which raised from its bed to the height of 2 ft. or 3 ft., according to admeasurement, the enormous amount of 5000 cubic feet, or 416 tons of solid rock, which fell severed in large blocks, nearly in the same position. The novelty of the process attracted a large number of spectators, and the facility with which the machine worked, and the extraordinary result of the blast, was the admiration of all. In excavating heavy rock cuttings the machine must be found a great acquisition, and its general adoption will cause a total revolution in the manner in which these undertakings are at present performed. The same evening it was forwarded by railway to the summit cutting, near Beatock Bridge, on the Caledonian Railway, where it will be immediately put in use.—*Westmoreland Gazette.*

PROGRESS OF LIGHTING BY ELECTRICITY—MR. STAITE'S NEW PATENT.—Mr. Staite continues with great ardour and perseverance his laudable endeavours to render the light, attainable from electricity, available for practical purposes. We were favoured a few days ago with a private exhibition of an electric lamp, constructed according to his last patent. We have seen a larger volume of light produced from electricity, but never so large a volume from so small a battery power; and at no time, and in no case, a light of this description so long sustained and so steady. Lighting by electricity has been a favourite dream of many; but Mr. Staite is, unquestionably, the first scientific experimenter who has reduced it to (what we may almost venture to call) a practical certainty. Amongst several applications which the inventor contemplates, may be mentioned one which we had the opportunity of seeing in operation—viz.: telegraphing by means of flashes of light through coloured media. With four sets of electrodes, for example, placed in glasses, coloured white, red, green, and blue, the whole alphabet, with the numerals, are indicated by a very simple code of signals, and with astonishing rapidity. The key-board of the telegraph is so arranged that each key in the series is coloured white, red, green, and blue; and when either key is pressed down, it completes the circuit, with that particular electrode, at the distant station which exhibits the same coloured flash. There may be any number of keys, and one to strike a bell at the conclusion of each word, or for the ordinary purposes of drawing attention, &c. For night signals on railways, Mr. Staite proposes to have fixed, at required distances from the stations, a signal-post, on which two, three, or more lamps, may be fixed—say, one inclosed in a red glass, one in green, and one in white. The battery wires are so arranged, that whichever lamp is required to show a light, the attendant at the station completes the circuit accordingly, and *vice versâ*. The red light may indicate "danger," the green light "caution," and so on. These lights may be shown at any distance *from* the stations, and be under the perfect control, at the same time, of the attendants *at* the station. We think such a system calculated to be of great service in preventing accidents at night, especially in dark or foggy weather. Mr. Staite uses the self-sustaining percolating battery of Messrs. Brett and Little (under license from the patentees); and he has, by this means, reduced the cost of the battery power to a minimum. Supposing the points of cost and continuousness to be determined in favour of the electric light, there can then be no question of its far surpassing every mode of illumination yet known. Mr. Staite is constructing a lamp combining all his recent improvements, and intends shortly exhibiting it to the public at large. The application of this light to coal mines (which is quite practicable) would be a great boon conferred upon them, inasmuch as it would ensure perfect safety in the foulest pits—the light being developed in a glass, hermetically closed, and to which no explosive gas could penetrate.—*Mechanics' Magazine.*

THE LATE ACCIDENT AT THE DEE BRIDGE.

PATENT METALLIC SAND, or ENGLISH POZZOLANO.

GREAT REDUCTION IN PRICE.

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From its chemical qualities, the metallic sand forms, in admixture with lime and common sand, a cement, mortar, or concrete, of flinty hardness, and almost entire incompressibility; and, from its adhesive and impervious qualities, it completely and for ever excludes water. The more it is exposed to the atmosphere, and to wet and damp, the harder and more durable it becomes.

As an external stucco, the metallic sand cement is unaffected by frost or wet; in appearance it resembles the best Portland stone—requires, therefore, neither colour nor paint, and is entirely free from vegetative cracks and blisters, to which Roman cement is liable.—Further information will be given, and specimens shown, on application to Mr. C. K. DYER, 4, New Broad-street, London.

ANALYSIS OF THE PATENT METALLIC SAND.

Silica	49	Lime	6
Oxide of iron	32	Magnesia	2
Alumina	8	Zinc	3

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TO ENGINEERS, BOILER-MAKERS, AND OTHERS.—

LAP-WELDED IRON TUBES, FOR STEAM-BOILERS.

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51

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52

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EXAMPLES.

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60	£1000	£0 3 4	1837	£217 15 1	£109 0 11	£16 0 4	£445 0 0
			1838	192 3 0	87 1 4	13 10 2	393 11 1
			1839	165 11 10	74 1 9	11 3 1	346 2 3
			1840	116 7 6	54 0 10	7 18 10	296 13 4
			1841	111 6 8	49 10 0	7 10 4	247 4 5

The division of profits is annual, and the next will be made in December of the present year. F. FERGUSON CAMROUX, Secretary.

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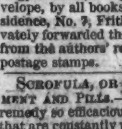

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56

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58

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It is intended, should this Subscription Room receive the support and patronage of adventurers generally, to obtain more ample accommodation for establishing an association in every respect commensurate with the important interest thereby represented; and to attempt to associate with mining adventurers such scientific parties, not being adventurers, as may be desirous to cultivate or extend a knowledge of this most important branch of national wealth, by affording the practical miner and the geologist more frequent opportunities of communication and association.

March, 1847.

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59

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J. Homfray, Esq., 22 A., Connaught-square
J. M. Macdonnell, Esq., M.P., 52, Manchester-street, Manchester-square
William Henry Rough, Esq., Middle Temple
(With power to add to their number).

PRINCIPAL MINING CAPTAIN—Capt. W. Williams, of Prase, near Camborne, Cornwall.
MANAGING CLERK AT THE MINES—Mr. J. C. Goodman.

BANKERS.

LONDON—Messrs. Glyn, Halifax, Mills, and Co., Lombard-street.
WALES—Messrs. Jones and Williams, Dolgelly, Merionethshire.

SOLICITORS.

LONDON—W. W. Fisher, Esq., 3, King-street, Cheapside; and Messrs. Wynne Williams, and Macleod, Temple.
WALES—Messrs. Owen and Griffiths, Dolgelly, Merionethshire.
ANALYTICAL CHYMIST—Dr. Andrew Ure, F.R.S., F.S.A., Charlottte-street, Bedford-square.
PURSER AND SECRETARY IN LONDON—W. T. Griffiths, Esq.

The mines proposed to be worked by this company extend under a surface of above 1000 acres, and are situate in the neighbourhood of Dolgelly, in the county of Merioneth.

Prospectuses and every information can be obtained at the offices of the company, 2, New Broad-street, City, where specimens of the ores, and original assays by some of the principal assayers of the present day, as well as the manuscript reports of several eminent mining captains, may be inspected.

Application for shares to be made to the purser, at the offices of the company, the solicitors, and the following brokers and agents:—Mr. B. Rankin, stockbroker, 23, Token-house-yard; Messrs. Watson and Cuell, mining agents and sharebrokers, St. Michael's-alley, Cornhill; and Mr. C. W. De Bernardy, 46, Leicester-square, London; Messrs. T. Cardwell, and Sons, and Mr. J. Fernyhough, Manchester; Mr. P. Kempson, sharebroker, Birmingham; Mr. C. S. Edsall, Truro; Mr. J. Cunningham, jun., Bristol; Mr. T. A. Marten, Swansea, South Wales; and Mr. J. Russell, Exchange south-east Liverpool; Messrs. C. Wellbeloved, and Co., Leeds; and Capt. W. Williams, near Crowan, Cornwall. Copies of the prospectus can also be had at the offices of Mr. H. English, mining engineer, 25, Fleet-street; and at the *Mining Journal*, 26, Fleet-street, London.

GEORGIA TIN MINES, divided into 2048 shares, and worked

ON THE COST-BOOK SYSTEM. 60

The necessary arrangements having been made for carrying out the operations of the company, all future communications are requested to be addressed to the offices of the company, 21, THROGMORTON-STREET, LONDON, where the specimens and plans, with the correspondence, may be seen.

WHEAL TRESCOLL MINE, NEAR ST. AUSTELL.—

This valuable MINING PROPERTY, that stands without an equal in this part of the county of Cornwall, with its EXTENSIVE SETT, is now ON SALE; and to facilitate which, a sample of its Tin Ores are being exhibited for a few days, at 5, Whitefriars-street, Fleet-street, which, for size and richness, cannot be equalled by any in London (the British Museum included); to give a faithfully true description of those stones would be perfectly absurd, as no one would believe such a statement; the proprietors, therefore, respectfully beg to invite the public to come and inspect them, when a full description will be given. The engineer of a celebrated adjoining mine is in attendance, from Ten till Four, for that purpose: the object being to make the public acquainted with the quality of the ores, and then proceed to form a company on their merits alone. 61

Apply to C. S. Richardson, Commercial and Mining Agent, 5, Whitefriars street, City.

WHEAL PORTLEDGE COPPER AND SILVER-LEAD MINE COMPANY,

ON THE COST-BOOK SYSTEM.

In 4000 shares.

BANKERS—Messrs. Harding, Braginton, and Co., Bideford.
SECRETARY—Mr. John How, jun., Bideford. 62

This MINE is situated on the sea-coast, in the parish of ALWINGTON, about 4 miles west of the town of BIDEFORD, in the county of Devon, and from the rich specimens of minerals already produced, bids fair to be a most profitable undertaking. The set extends over 500 acres of land, the property of one gentleman, from whom a lease of 22 years, from the 19th of April, 1847, has been obtained, at a royalty or dues of 1-15th of the produce.

Advantages present themselves for working this mine, which rarely occur, not only as respects the appearance of the lodes, but also from the facility afforded for working it at a considerable depth without the aid of expensive machinery, as well as its being in the immediate vicinity of an excellent place for shipment.

The cliffs rising from the sea-coast (and in which the minerals are found), are sufficiently high to admit of driving an adit level on the course of the lode, about 50 fathoms below the surface of the land, thereby rendering the expense of steam or other power to clear the water from the mine to that depth unnecessary.

Samples of copper ore taken from the mine have been assayed by two different public assayers, who have given the same result of produce—namely, 14½ per cent. Specimens of silver-lead ore have also been raised, the value of which is not yet ascertained.

In the formation of the present company the lessee proposes to admit coadventurers with himself on fair and equitable terms in all the advantages which the mine offers; he, therefore, proposes to divide the mine into 4000 shares, reserving 1000 to himself, upon which he will pay equally with the other adventurers.

£1 1s. per share will be required to be paid on the transfer of the shares; £1 per share to go to the lessee, and 1s. per share to be applied to the working of the mine. Future calls, if required, to be made at 1s. per share, at intervals of not less than three months; but from the great advantages afforded for working the mine, and the rich specimens of ore already raised, as well as the general formation and appearance of the lodes and strata, it is confidently believed that not more than the first deposit of 1s. per share will be required to be expended in working the mine, before sufficient ore will be raised to pay the cost, and leave a dividend for the shareholders.

A committee of management will be chosen out of the shareholders at the first general meeting. No shareholder will be liable for any amount above the number of shares he holds. Applications for shares, or other particulars, to be made to the secretary.

WHEAL ANN, COPPER, TIN, & SILVER-LEAD MINE,

in the parish of BRIDFORD, in the county of DEVON. 63

This mine is divided into 512 shares.

WHEAL ANN, COPPER, TIN, and SILVER-LEAD MINE, is situated in the parish of BRIDFORD, in the county of Devon, about eight miles from Exeter, to the west. This sett has been recently obtained from Joseph Northcot, Esq., at 1-15th dues for 21 years.

This sett extends in length about a mile and a-half, and in breadth one mile. In this sett there is found to be several east and west lodes running through it; in one of them, there was some years since an adit taken up and driven into the hills about 10 fathoms; in this adit level there is a cross-cut driven south, about 5 fathoms, and cut through a large lode, about 4 fathoms wide; in this lode there are several branches of silver-lead ore, that when broken down altogether, without any dressing, it produced by the assay 40½ ozs. to the ton of ore.

In this lode we have some very fine stones of copper and tin ore, of very superior quality; there are also good stones of cobalt in the same lode; there are in this lode large quantities of stuff, which has been assayed by several painters, and is equal to the Spanish umber—this we can raise 100 tons per week; and by extending this adit 100 fathoms more into the hill, we shall have then about 70 fathoms back from the surface, the hill rises so fast. There is also on the back of this same lode, about 100 fathoms to the west of the adit end—there is a shaft sunk about 4 fathoms, in a very fine gossan lode, about 10 feet wide—some of this gossan has produced by the assay 160 ozs. of silver to the ton of ores, by a letter received from the lord, that can be produced at any time. Besides these east and west lodes, there are two north and south lodes running through this sett, which are of a very promising appearance for lead ore; on one of them there is a very large sulphuret of barytes lode, 18 feet wide, that contains mundic and small portions of lead.

It is a plain fact that these are very favourable indications of making a rich lead lode; on the eastern one of these north and south lodes, there is on the back of this lode a large gossan, 6 feet wide, from which there has been some risen, about 10 feet below the surface, that has produced, by Capt. J. Prince's assay, for lead, 4 cwts. 2 qrs. 14 lbs.—for silver, 34 ozs. 12 dwts. 6 grs. to the ton of ore.

Looking at the favourable advantages of working this mine, that it cannot be equalled by any mine in Devon or Cornwall—seeing that we have the advantage of the rise of the hill, that we can take up an adit and drive in under the hill; by driving this adit about 200 fathoms west on the course of the lode, it will be about 100 fathoms deep from the surface; this, from the appearance of it, can be driven for about £3 per fathom, and not requiring any timber for it. It is anticipated that this adit will pay for driving itself, from the appearance of the lode in the adit end; seeing that we have a very fine stream of water running at the foot of the hill for dressing the ores, and looking at the facilities of working this mine without any machinery, it can be worked with a small capital. It is the opinion of all the experienced mine-agents that have seen it, and also the old and experienced miners, that there will not be a more profitable mine to the adventurers, in Devon or Cornwall, if worked with spirit.

This mine is divided into 512 shares, and £1 per share to be paid on the appropriation of the share.

Applications for shares to be made to W. H. Smith, Esq., R.N., 10, Warnford-court, Throgmorton-street, London, or to Capt. T. Moyle, Christow, near Exeter.

BRUNTON'S PATENT ORE-DRESSING FRAME.—

These FRAMES, for DRESSING TIN, COPPER, and OTHER MINERALS, having been in use, and given satisfaction, on several mines, during the last two years, the PATENTEE begs to call the attention of all Adventurers and Mine Agents to the great advantages, both as regards economy of labour and the great increase of mineral obtained by their adoption. The following gentlemen can certify as to their utility:—Thos. Bolitho and Sons; P. N. Johnson, Esq.; Capt. Jos. Vivian, Cook's Kitchen Mine; Capt. R. Kernick, St. Ives Consols; Capt. R. Edwards, Wheal Franco; Capt. W. Teague, Wheal Grey; Capt. James Minors, and Capt. Matthew Rogers, Carn Brea Mines. 64

STRONG MIXING PIG-IRON.—The YSTALYFERA

IRON COMPANY beg to solicit ORDERS for their ANTHRACITE PIG-IRON. This iron mixes well with Scotch pig—imparting to it strength and elasticity, and receiving from it a portion of its softness and fluidity. No. 3 Pig is recommended for mixing with soft iron—Nos. 1 and 2, for machinery castings, requiring great soundness and strength. At this period, when cast-iron is so much employed in the construction of bridges and other buildings, requiring all the strength and elasticity which the best mixture of metal will afford, it may be interesting to call attention to the characteristics of ANTHRACITE PIG-IRON, as REPORTED on by that great practical authority, the late DAVID MUSHET, Esq., M.I.C.E.:—

"It greatly exceeds, in *strength*, in *defective* powers, and capacity to resist *impact*, any iron at this time manufactured in the United Kingdom." 65

"It now only remains for me to mention a property peculiar to this iron, which was noticed at the time I made the trial experiments, four years ago, but which has been more fully developed in those more recently made. The property referred to is one of *great springiness*, or *elasticity*, which communicates a tendency to the bar, in deflecting and breaking, to resume its rectangular form. Bars that had obtained a permanent set of 2-10ths, when afterwards broken, presented but a slight deviation from a right line; and, in no case, did the curvature exceed one-fourth of a tenth."

"It was also remarked, that most of the fractures, in breaking, presented a *regularity of grain* throughout, resembling the structure of *unhardened steel*."

Address THE YSTALYFERA IRON COMPANY,
Dated June 22, 1847. *Near NEATH, SOUTH WALES.*

HOT-BLAST WITHOUT COAL, LABOUR, OR REPAIRS.

DIXON AND BUDD'S PATENTS.

Apply for particulars, or to inspect the process in operation on six blast-furnaces, to J. Palmer Budd, Esq., Ystalyfera Iron-Works, near Neath. 66

Dated June 22, 1847.

IMPORTANT TO ENGINEERS, MANUFACTURERS,

RAILWAY AND STEAM-BOAT COMPANIES.

Messrs. W. & C. MATHER beg to call the attention of the ABOVE PARTIES to their

IMPROVED PATENT ELASTIC METALLIC PISTONS. 67

The PRINCIPAL FEATURE and ADVANTAGE of THIS IMPROVEMENT is

1. Its great ELASTICITY and SELF-ADJUSTING PROPERTIES, which enable it to yield to any inaccuracy of the cylinder, whether oval or taper, and to move with the least possible friction.

2. Its extreme SIMPLICITY and LIGHTNESS, consisting of only two pieces of metal, having the vertical and lateral pressure in due and proper proportion, independent of each other.

3. It takes the LEAST possible SPACE, and is well adapted for air and water-pumps, as it allows of a larger water way.

Messrs. W. & C. MATHER feel confident that it is the BEST ELASTIC METALLIC PACKING yet known, for the above reasons.

Models may be seen at the Salford Iron-Works, Manchester; at W. Barker's, engineer, Newton-Moor; and also at J. Mather's, engineer, Beaufort-street, Chelsea, London.

STEAM COAL—WITHOUT SMOKE, as per experiments

made at her Majesty's Dockyard, Woolwich.

CAMERON'S COALBROOK STEAM COAL, AND SWANSEA AND LOUGHOR RAILWAY COMPANY.—(Completely Registered and Incorporated.) 68

OFFICES—2, MOORGATE-STREET, LONDON.

The directors are now prepared to supply steam ship companies, manufacturers, shippers, and others, with the company's steam coal, either at the company's wharf at Swansea, or in London. A statement, showing by comparative trial the superiority of this coal for steam purposes over every other, and a scale of prices, may be had on application at the company's offices here, or at their wharf at Swansea.—March 18, 1846.

FLEXIBLE HOSE-PIPES FOR LOCOMOTIVE ENGINES,

RAILWAY CRANES, FIRE-ENGINES, GAS, &c.

PATENT VULCANISED INDIA-RUBBER HOSE-PIPES AND TUBING OF EVERY DESCRIPTION. 69

These pipes are made to stand hot-water without injury—are very superior to leather pipes, or the common India-rubber pipes; and, as they do not become hard or stiff in the lowest temperatures, or require any application when out of use, are particularly well adapted for fire-engines.

FLEXIBLE TUBING, of every description, for gas, chemical purposes, &c.

VULCANISED INDIA-RUBBER WASHERS, all sizes, for steam and hot-water joints, &c.—Sole manufacturer, JAMES LYNE HANCOCK,

Goswell Mews, Goswell-road, London.

THE PATENT SAFETY FUSE,

FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDITIOUS MODE of effecting this very hazardous operation. From many testimonies to its usefulness with which the manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c.:—"I am very glad to hear that my recommendations have been of any service to you; they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this.'

Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Camborne, Cornwall. 70

SOUTH AUSTRALIAN BANKING COMPANY.—At the

Sixth Annual General Meeting, held at their office, 54, Old Broad-street, on Tuesday, June 29, 1847, the following RESOLUTIONS were unanimously adopted—viz.:

Moved by E. Divett, Esq., M.P., seconded by G. Gillman, Esq.,

1. That the report of the company's operations, as now read, be adopted for the sixth annual report of the South Australian Banking Company, and printed and circulated under the direction of the board; also, that the accounts of the company's affairs, to the 31st May last (as now submitted), be approved. 71

Moved by J. R. Todd, Esq., seconded by J. Brewster, Esq.,

2. That the recommendation of the directors to declare, for the ensuing year, a dividend of £5 per cent. per annum (clear of income tax) on the instalment paid up, be adopted, and that they be authorised to pay the same half-yearly, as before.

Moved by R. Foster, Esq., seconded by R. Oakes, Esq.,

3. That Sir John Pirie, Bart., alderman, be re-elected a director, and John Bazley White, Esq., be appointed a director, in the room of George Davenport, Esq., deceased; and that John Brown and Felix Ladbroke, Esqs., be re-elected as auditors of the company.

Moved by J. Brown, Esq. (Dowgate), seconded by the Rev. T. Timpson,

4. That the thanks of the proprietors are eminently due, and are hereby given, to the chairman and directors, for their great attention to the concerns of the company.

Moved by E. Divett, Esq., M.P., seconded by J. Wheelton, Esq.,

5. That the cordial thanks of this meeting be given to the local directors at Adelaide, and to the manager, E. Stevens, Esq., also to the London manager, E. J. Wheeler, Esq., for their constant attention to the company's affairs.

London, June 29, 1847. EDMUND J. WHEELER, Manager.

SOUTH AUSTRALIAN COMPANY.—At the Eleventh An-

nual General Meeting of the proprietors, held at their offices, 4, New Broad-street, on Wednesday, the 30th June, 1847, the meeting having been also special, to consider and decide on a proposal to authorise the directors to issue a limited number of new shares, the following RESOLUTIONS were unanimously adopted:—

Moved by Colonel Torrens, seconded by V. Knight, Esq., 72

1. That the report of the company's operations, as now read, be adopted for the 11th Annual Report of the South Australian Company, and printed and circulated under the direction of the board; also, that the accounts of the company's affairs, to 30th April last, as now submitted, be approved.

Moved by Edward Divett, Esq., M.P., seconded by Capt. Henry Meynell, R.N., M.P.,

2. That, in order to liquidate the present obligations of the company, this meeting authorises the board of directors to issue to each shareholder, whose calls have been paid up, and who may be disposed to take the same, half the number of his or her existing shares, at £15 per share, payable in three equal instalments, on the 20th July, 20th November, and 20th February next—discount, at the rate of 6 per cent. per annum, to be allowed on the two latter calls to those shareholders who shall pay the whole at once. These shares, when paid-up, to be in all respects on a par with the old shares of £25—the directors to have liberty to offer what proportion of these shares may be refused by the shareholders entitled to them to other shareholders first, and subsequently to the public, to such an extent as the board may think necessary.

Moved by John Fussell, Esq., seconded by James Brewster, Esq.,

3. That Sir Culling Eardley Eardley, Bart., and James Ruddell Todd, Esq., who retire by rotation, be re-elected directors; that Charles Roberts, Esq., be appointed a director, in place of the late George Davenport, Esq.; that John Bazley White, Esq., be re-elected an auditor; and that William Richards, Esq., be chosen an auditor, in room of Charles Roberts, Esq., resigned.

Moved by the Rev. Thomas Timpson, seconded by Thomas Fussell, Esq.,

4. That the most cordial thanks of the meeting be given to the chairman and directors for their very great attention in conducting the affairs of the company.

Moved by Thomas Fussell, Esq., seconded by George Miller, Esq.,

5. That the best thanks of the meeting be given to Mr. M'Laren, and to Mr. Giles (Colonial Manager), for their continued zealous services in the company's affairs.

London, June 30, 1847. DAVID M'LAREN, Manager.

AGRICULTURIST CATTLE INSURANCE COMPANY,

8, CHATHAM-PLACE, BLACKFRIARS, LONDON,

And No. 9, SOUTH ST. ANDREW-STREET, EDINBURGH. 73

(Registered under 7 and 8 Victoria, cap. 110.)

Subscribed Capital—£250,000.

This company was established for the protection of FARMERS and AGRICULTURISTS against Loss by DISEASE or ACCIDENT among their LIVE FARMING STOCK, in June, 1845; and, on the 31st of December, 1846, had issued 15,000 agreements, and paid upwards of £33,000 for losses.—This being a PROPRIETARY COMPANY, with a *subscribed capital*, insurers incur no liability beyond the amount of their premiums, and are put to no additional expense. *Three-fourths* of the insured amount is paid in case of *loss*, and *claims* are punctually paid every week.

LIFE INSURANCE DEPARTMENT.

Insurances on Lives are effected—*Annuities and Endowments* granted—and every branch of *Life Insurance* conducted on the *most liberal terms*.—Farmers and Agriculturists will find this office *moderate* in its *rates*, and peculiarly adapted to their position and circumstances.

Annual Premiums for the Insurance of £100 on a Single Life.

Age next Birth Day.	Whole of Life without Profits.	Whole of Life with Profits.	For the Term of One Year.	For the Term of Five Years.
15	£1 11 3	£1 13 7	£0 16 10	£0 18 8
20	1 15 0	1 17 8	1 1 3	1 2 5
25	1 19 10	2 2 10	1 4 0	1 4 6
30	2 5 7	2 9 1	1 5 9	1 6 4
40	3 0 7	3 5 4	1 9 10	1 11 4
50	4 4 7	4 11 4	3 1 6	2 5 7

Application for prospectuses, and every other information, may be made to WILLIAM FENTON, Esq., Manager,
64 TO THE LOCAL AGENTS.

THE LATE MR. DAVID MUSHET, formerly of the Clyde

Iron-Works.—This illustrious metallurgist was the discoverer of the Blackband, since fitly named the Mushet Ironstone. He it was who first pointed out its great value to the ironmasters and landowners. This excellent man expired on the 9th of June, at Coleford, Gloucestershire, leaving his widow with two grandchildren. A few friends, therefore, APPEAL to those IRONMASTERS and LANDOWNERS (of Scotland especially), who have, during many years, been reaping thousands annually by his manifold important discoveries in iron making, to show their gratitude and respect. Such persons have now the opportunity of testifying the sense they entertain of his merit, by subscribing liberally towards the support of Mrs. Mushet and her young charge. Mr. Mushet was too ardently devoted to science to pursue his own exclusive interest; and, during his long life, was the means (under Divine Providence) of pouring streams of wealth into the coffers of others—not doubting that his country would handsomely provide for those he left behind; and surely Scotland cannot repudiate the claim.

Owing to the unhappy dissentions in the family, donations are respectfully requested to be addressed either to the widow direct, or to her youngest son, Mr. Robert Mushet, of Coleford, Gloucestershire. 74

SUBSCRIPTIONS ALREADY RECEIVED.

John Wilson, Esq., Dundyvan	£100	0	0
"An Old and Sincere Friend," Liverpool	500	0	0

(For which most sincere thanks are returned.)

BIRMINGHAM AND OXFORD JUNCTION RAILWAY.

THIRD CALL OF FIVE POUNDS PER SHARE.

The directors having passed a resolution, requiring the shareholders to pay a further CALL of FIVE POUNDS on each and every share held by them respectively, on the 2d day of August, 1847,—Notice is hereby given, that the shareholders are required to PAY such call on the day appointed, to one of the under-mentioned bankers; and, in default thereof, they will be charged with interest, at the rate of 5 per cent. per annum, from that date until the said call is actually paid:— 75

The Birmingham Banking Company } Birmingham.
Messrs. Attwoods, Spooner, and Co. }
Or at their London Agents:
Messrs. Jones Loyd and Co., for the Birmingham Banking Company.
Messrs. Spooner, Attwood, and Co., for Messrs. Attwoods and Co.; and at
Messrs. Moss and Co., Liverpool, for the Birmingham Banking Company.

A circular will be sent to each shareholder, which must be deposited at the bankers when the call is paid. By order of the board of directors,

JOHN WM. KIRKHAW, Secretary.

34, Bennett's-hill, Birmingham, June 12, 1847.

CALEDONIAN RAILWAY—EIGHTH INSTALMENT,

FIFTY POUND SHARES.

Notice is hereby given, that the directors of the CALEDONIAN RAILWAY COMPANY have made another CALL for FIVE POUNDS per share, PAYABLE at any of the following banks, on or before the 10th inst., after which day the bankers will charge interest, at the rate of 5 per cent. per annum. 76

LONDON—Messrs. Masterman and Co.
LIVERPOOL—Messrs. Moss and Co.
MANCHESTER—Sir Benjamin Heywood and Co.
BRISTOL—The National Provincial Bank of England.
NEWCASTLE-ON-TYNE—The Newcastle Commercial Banking Company.
EDINBURGH and GLASGOW—The Commercial Bank of Scotland.

122, Princes-street, Edinburgh, July 1, 1847. D. RANKINE, Treasurer.

N.B.—Shares cannot be transferred till all calls made upon them have been paid. Payments are not received at this office, nor otherwise than at one of the above banks.

CALEDONIAN RAILWAY—LOANS ON DEBENTURES.

—The CALEDONIAN RAILWAY COMPANY are prepared to RECEIVE TENDERS of LOANS on DEBENTURES, in sums of not less than £500, for three or five years, bearing interest at the rate of 5 per cent. per annum, payable half-yearly, in Edinburgh, Glasgow, London, Liverpool, Manchester, or Bristol. 77

Tenders to be addressed to this office.—Parties may also communicate personally with Messrs. Foster and Braithwaite, 68, Old Broad-street, London.

By order of the directors, D. RANKINE, Treasurer.

Caledonian Railway Office, 122, Princes-street, Edinburgh, March 26, 1847.

CLARENCE RAILWAY.—Notice is hereby give[illegible] the

HALF-YEAR'S DIVIDEND, due 1st of July, 1847, on the 35[illegible]ASS PREFERENTIAL SHARES, at the rate 5 per cent. per annum, will be PAI[illegible] company's office, 80, Old Broad-street, London, on and after that date. 78

By order of the Committee of Management,

June 29, 1847. CHARLES BENSON, Secretary.

LOUVAIN A LA SAMBRE RAILWAY—DIRECT TO

NAMUR AND CHARLEROY.

The directors of the above company beg to inform their shareholders, that INTEREST on the paid-up capital, at the rate of 4 per cent. per annum, for the half-year ending 31st June, 1847, is now due, and will be in course of PAYMENT on and after Monday next, 5th July proximo. Shareholders are requested to send their certificates to this office, between the hours of 11 A.M. and 3 P.M., on any day after the said 31st June, in exchange for which a receipt will be given; and on the third day after the said deposit being so made, a cheque for the amount due will be receivable by the proprietor, who will at the same time have his certificates returned to him. JOHN BARNES, President. 80

GEO. DANCE, Secretary.

28, Threadneedle-street, London, Monday, June 27, 1847.

NEWCASTLE AND BERWICK RAILWAY.—OPENING

OF THE LINE THROUGHOUT BETWEEN NEWCASTLE AND BERWICK.—On and after THURSDAY, the 1st July, the LINE will be OPEN THROUGHOUT for PASSENGER TRAFFIC, and TRAINS will LEAVE LONDON and EDINBURGH at the following hours, by which passengers may be booked through. 79

LEAVE LONDON	9 25 A.M.,	10 36 A.M.,	and 9 0 P.M.
ARRIVING AT EDINBURGH	11 0 P.M.,	5 30 A.M.,	and 4 15 P.M.
LEAVE EDINBURGH	7 0 A.M.,	9 0 A.M.,	and 4 0 P.M.
ARRIVE IN LONDON	9 0 P.M.,	4 45 A.M.,	and 8 0 A.M.

Newcastle, June 28, 1847. By order, JAMES ALLPORT, Manager.

ELECTRIC TELEGRAPHS.—As INVENTORS and

PATENTEES of the ELECTRO-TELEGRAPHIC CONVERSER, the principle of which is far more SIMPLE, CERTAIN, and PERFECT, than that of ANY of the TELEGRAPHS at present known to the world, we cannot but deplore the necessity for still keeping secret the details of the various improvements comprised in our patents, because we are confident, that, when once they are made public, their advantages will be so manifest, as to sink the best of its predecessors into comparative insignificance. 81

When we assert that our instrument is not subject to derangement from atmospheric influences—that it is perfectly free from vibration, and that its power is unlimited—which we shall be able to demonstrate by its application to *a thousand miles of wire*, through a greater number of instruments than can be used under any existing system—we hope that we have said sufficient to induce all concerned to await the enrolment of our specification, which must take place early in August.

We avail ourselves of this opportunity of disclaiming all connection with any Printing Telegraph.—140, Holborn-bars. BRETT & LITTLE.

IMPORTANT TO RAILWAY AND STEAM NAVIGATION

COMPANIES, MANUFACTURERS, AND ENGINEERS.

W. BROTHERTON AND CO.'S

PATENT LUBRICATING FLUID (or Animal Oil) FOR ALL DESCRIPTIONS OF MACHINERY. 82

W. B. & CO. have the pleasure to state, that the above article is extensively used in her Majesty's Steam Navy, and by several of the principal Steam Navigation and Railway Companies, and is pronounced by them, and by the first practical engineers of the day, to be far better adapted for the purposes of lubrication than any other article hitherto used for such purposes. The Patent Lubricating Fluid is equally applicable for the most intricate and fine pieces of machinery, as for the heaviest bearings of the steam-engine. It is cheaper, much more economical, and cleaner than oil at present in use; is free from smell, and calculated to effect a vast saving in the expenditure of working steam powers.

Further particulars can be had, and testimonials seen, by application to the manufacturers, W. BROTHERTON & CO., Hungerford Wharf, Strand, London.

N.B.—The above article will burn in lamps, and give a light equal to the best sperm oil.

PATENT GALVANISED IRON AND WIRE ROPE WORKS,

MILLWALL, POPLAR. 83

ANDREW SMITH begs to inform the Mining, Railway, and Shipping interests, that he has obtained a PATENT for an IMPROVED METHOD of GALVANISING IRON, producing a much superior article at a considerable saving in cost—the improved process for galvanising wire rope, adding only £10 per ton instead of £20, under the ordinary processes. The rope is extensively used in damp situations, for mining and railway purposes, and for ships' standing rigging.

TO ENGINEERS, RAILWAY CONTRACTORS, MINING

AGENTS, IRONMASTERS, AND OTHERS REQUIRING FINE GREASE for MACHINERY and AXLES of every description.—JOSEPH PERCIVAL'S IMPROVED ANTI-FRICTION GREASE is—after trials on machinery and axles of every kind where constant friction is kept up—admitted to be the most useful, economical, and best preparation of the kind ever offered to the public. 84

References to scientific and practical men can be given, and testimonials shown of its great excellence.—Samples forwarded on application at the manufactory, Green-street, Wellington-street, Blackfriars-road, London.

IMPORTANT TO RAILWAY COMPANIES.

PATENT KAMPTULICON COMPANY, 18, CORNHILL.

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By order of the board, P. G. GREVILLE, Secretary.

PATENT IMPROVEMENTS IN CHRONOMETERS,

WATCHES, AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each. 86

DENT'S PATENT DIPLIEDOSCOPE, or meridian instrument, is now ready for delivery. Pamphlets containing a description and directions for its use 1s. each, but to customers gratis.

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"*.*" It will at all times save much delay and inconvenience, if communications are directed simply To THE EDITOR, *Mining Journal Office*, 26, FLEET-STREET, LONDON.

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